Transdisciplinary Literature Reviews and Research-based Practice for Designing an Original Novella and Original Prisoner's Dilemma Model with an Ending to Criminal Motivations and the Selfish Binary

Rowan Wells

Faculty of Business, Education, Law and Arts

Creative Writing Discipline

University of Southern Queensland

Submitted in fulfilment of the requirements for the degree of

Bachelor of Arts (Honours) (Creative and Critical Writing)

HMT4001 and HMT4002

2022

Abstract

This original Creative Writing transdisciplinary hybrid exegesis-thesis ("thesis") and study, was produced as content for developing a highly original science fiction novella that critically "deluminates" the Prisoner's Dilemma and Iterated Prisoner's Dilemma models (the "PD models") and legal system assumptions. Research structures, processes and techniques relevant to this researcher's research questions are thoroughly investigated. Structural transdisciplinary inquiry and disciplinary literature review methods are deconstructed and applied.

The Research-based Practice research and literature review method developed herein, is a highly portable and creative method applicable to traditional research frameworks, enabled the researcher to incorporate divergent knowledges and creatively fuse them within a transdisciplinary framework. The knowledge produced critically deluminates the PD models. Research-based Practice is built upon the researcher's grounded theory derivation of Aristotle Knowledge Development Theory, and likewise, Practice Research Theory. Examining the PD models through broad and specific knowledge angles and differing research lenses enabled the researcher to deconstruct them and their real life contributions for the purposes of examining their broader implications in an original novella "factoring" the PD models, an original PD model and this original thesis content.

Creative writing disciplinary ("Creative Writing") researchers are found to contribute towards multiple disciplinary debates. They efficiently apply multiple disciplinary research in creative texts examining the broad implications of a change in society, effectively testing the strengths and weakness of existing research and their own research. Creative Writing researchers

expressly or impliedly examine solutions to problems. "Knowing", mediated through knowledge, multi-sensory data and their embodiment, is the highest and most fundamental form of knowledge used by Creative Writing researchers and claimed by the researcher and applies across all research products.

Four Creative Writing researchers' works are explored. They are found to varying degrees to reject real-life legal system models and assumptions, and two explicitly reject the PD models' assumptions. No new legal system model was proposed, however. This researcher goes further by applying knowledge generated in this original thesis to develop an original "legal system" PD model, the cultural impact of which is efficiently explored in the novella.

This researcher finds terminal flaws existing with the PD models' binary legal system and real-life assumptions. The PD models contain selfish binary parties and strongly motivate a "tough-on-crime" legal culture towards "alleged" offenders and grossly affect, limit and dispense with crucial real-life decision-making information. The PD models press towards imprisonment! The psychology applied in the PD models, the payoffs and prison focus are found to be examples of economic violence and includes workplace violence. The emphasis on interrogation confessions has resulted in the PD models' imprisonment focus and is found to motivate "cultures of imprisonment", trauma and suffering as evidenced in the PD models' symbols.

The PD models' motivations are shown to result in younger people making false confessions, being wrongfully convicted and experiencing fatal retributions. The PD interrogations and prison motivations result in significant justice and workforce participation costs, increase civil unrest and increase crime. Notwithstanding these finding, the researcher considers it

necessary to create an original new PD model due to the potential benefits of positive "economic morality". These findings had profound implications for the researcher's development of the original novella.

This study highlights that not only mathematical modellers, but also science fiction and crime writers should engage with and reflect on multiple disciplinary knowledges and expertise prior to forming mathematical or creative writing models. In addition, mathematicians and writers should engage with non-binary theory and narratives to limit binary harms. This research adds to Creative Writing research regarding non-linear geometric writing through the development of a new formulaic, 2-dimensional geometric and narrative original PD model, designed for real-world applications especially eradicating or reducing crime.

The original novella, PD model and thesis hold the potential to eliminate or reduce binary thinking and harms. The PD models, and a cultural shift towards the non-binary original PD model, are explored in the novella's cultural world. The shift from a binary to a new complex non-binary society is addressed through the original PD model's "overbearing influences" factors. Other binary thinking is identified and explored in the novella, including within the sciences for science fiction purposes.

The researcher found it necessary to conduct "science fiction" research experiments and found key Einstein and Darwin theories contained "harmful myths" of reality. Binary mythologies evident across society, including structural, social and religious binaries, are investigated in the original novella. Mythologised cultural binaries are fundamentally deconstructed by the researcher, which has the effect of dramatically improving human experience of "society".

Statement of Original Authorship

The work contained in this thesis has not been previously submitted to meet requirements for an award at this or any other higher education institution. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made.

USQ Verified Signature

Signature:

Date: 22 / 02 / 2022

Acknowledgements

I would like to thank my research supervisors for their patience, guidance and encouragement as I undertook Honours studies at the University of Southern Queensland. I have been extremely lucky to have had supervisors who cared about my work and who responded to my questions and queries. These stellar people include:

- Shirley O'Neill, my supervisor and Professor

- Kate Cantrell, my supervisor and Lecturer

- Tania Leach, my Associate Dean of Learning, Teaching and Student Success

- Barbara de la Harpe, my Dean and Professor

I must express my gratitude to my family and friends for their continued support and encouragement throughout my Creative Writing Honours research project. I thank God for my ongoing faith after assessing theological findings.

Table of Contents

List of Figures, Tables and Chart

Chart List

Chapter 1

Important policy questions tend to span a range of academic disciplines, and the relevant research is often carried out in a variety of social, economic and geographic contexts. In efforts to synthesise research to help inform decisions arising from the policy questions, systematic reviews need conceptual frameworks and ways of thinking that combine knowledge drawn from different academic traditions and contexts; in other words, transdisciplinary research.

(Oliver et al. 2017, p.1)

Introduction

This thesis research is transdisciplinary and was necessary for deconstructing the complex multiple disciplinary interrogation models, the Prisoner's Dilemma ("PD") and the Iterated Prisoner's Dilemma ("IPD") models (hereafter referred to as the "PD models") for the purpose of considering writing an original novella on this subject and potentially building an original PD model. The novella was created from knowledge contained and developed in this Creative Writing discipline ("Creative Writing") exegesis-thesis ("thesis"), and the research knowledge is fused symbiotically across all research products.

Research-based Practice is the major research tool for incorporating divergent knowledges and fusing them herein. It is developed in this paper and built using the grounded theory derivations of Aristotle Knowledge Development Theory and Practice Research Theory. The multiple disciplinary transdisciplinary knowledges, methodologies and methods contained in this thesis were necessary for delivering "justice" to the topic of holistically examining the PD models, which imply the incorporation of multiple disciplinary knowledges, including:

creative writing narratives, economics and mathematics, philosophy and gender studies, law and legal processes, psychology, empirical studies and field experiments. This is the first study of this kind harnessing these multiple disciplinary perspectives to "interrogate" the PD models, and expressly for the purpose of creating an original novella, PD model and thesis.

This researcher enters the PD models' multiple-disciplinary debates and knowledges' environments and deluminates the PD models. Transdisciplinary studies may be "messy" (McGregor 2004) but enable topics to be thoroughly investigated. The researcher brings a transdisciplinary approach to bear using multiple disciplinary knowledges and includes the researcher's past studies, knowledges, skills and experiences, enabling the researcher to deconstruct the PD models as an "inquirer" (Montuori 2013, p. 45). Transdisciplinary studies place researchers in the powerful position of the "knower" and this is strength in this study.

This research builds on Cantrell's (2014) Creative Writing research of non-linear creative writing practice through this researcher's development of an original PD model drafted in formula, geometry and narratives terms and for writing an original novella on the topic. The original PD model, furthermore, has possible crucial real world applications.

The researcher's findings challenge the PD models as fabricated realities as "mythologies". The researcher's scientific investigations find the researcher challenging other scientific models of reality as evident in the novella for deconstructing binaries in the "novella's" world.

Eliminating binary thinking and models, due to their limitations and harms, then becomes the main focus of the research project. The researcher utilises Creative Writing research to efficiently examine the effects of a change in society. Philosophy is engaged through the window of the PD models' representations of reality. Michel Foucault's creative article on the subject of "What is an Author?", challenges author originality as someone who simply writes down "circulating" discourses (Foucault 1977). In different ways, this researcher answers "What is a Creative Writing Researcher?", evidencing Creative Writing researchers having entered into complex debates using complex knowledges skilfully.

Science fiction writers challenge existing structures, models and theories or "fissures" in the world currently, and build alternative theories and models intended expressly or impliedly to be applied. This Creative Writing researcher finds embodied knowing to be the most fundamental form of "knowing" or knowledge claimable: multiple sensory knowing, mediated through knowledge, multi-sensory data and wholly embodied in the researcher, which applies to developments in this research project.

Research Parameters

This study's main research focuses and parameters occur mostly from the 1950s onwards. Controversies of PD models, the gaps between theory and real life or the "fissures" in reality are explored. Relevant laws and the novella's focuses where possible exist in Adelaide and South Australia. Australian and international information is incorporated when necessary. The science fiction novella contains "universe-orientated" themes. This research content will be interwoven as evident in the original novella, PD model and thesis.

Research Considerations and Research Questions Development

The research questions are derived in the transdisciplinary literature review after an analysis of the debates surrounding different claims concerning game theory and the PD models. The researcher finds that the PD models address a serious topic that effects interrogatees and prisoners and necessarily requires urgent research. No holistic transdisciplinary study was previously completed on the PD models prior to this study.

Summary of Research Findings

The researcher makes a number of key findings in this transdisciplinary study, which are summarised as follows:

1. Primary Findings:

   A. Creative Writing Research Findings

   - Creative Writing researchers "reject" the fixed nature of the PD models' legal system assumptions and Australian criminal legal system assumptions that indicates imprisonment is a solution or ends crime, and finds severe trauma and torture exist in all legal system processes. The researchers studied do not, however, present an alternative model of the legal system. This researcher introduces an original PD model and alternative non-binary legal system model, which is reflected in the researcher's creative work.

   - Creative Writing researchers and creative writers conduct reality "experiments" when crafting stories about future cultural change, and efficiently model the effects of societal change.

   - The researcher wrote from a world of interrogations and prisons in various forms towards a world completely without interrogations and prisons.

   - Binaries in Creative Writing structure and thought are problematic and should be considered by creative writers. Anti-Saussurean Binary Opposition is a viable choice for deconstructing binary models.

5

- Creative Writing researchers may design geometric models for story design that have real-life applications.

- Geometry common in story structure also exists in text structures including paragraphs, sentences, phrases and words.

- Creative Writing researchers deliberately enter into and contribute towards disciplinary debates, including multiple disciplinary debates.

- Practice Research Theory necessarily incorporates Aristotle Knowledge Development Theory, but modifies it in key creative ways. A portable form of Practice Research Theory is contained in the Research-based Practice research and literature review method.

- Science fiction writers challenge mythologised culture.

- Due to the narrative nature of literature reviews, Creative Writing researchers are able to access and contribute towards multiple disciplinary knowledges.

B. PD Models Research Findings

- The PD models motivate tough-on-crime binary harms and biases.

- PD models contain incentives that detrimentally focus on imprisonment, are logically linked to young people's false confessions, retributions towards young people, interrogation trauma and civil unrest, severe prison physical and psychological trauma, cause workforce participation harm, limit economic growth, cause increases in crime, act as rewards, offend economic principles and morality, ignore legal safeguards, ignore detrimental relevant psychological research on severe prison trauma and environments that lead to crime, and ignore other more productive choices for reducing crime.

- There are two selfish parties in the PD models: law enforcement that seeks a confession through maximisation and minimisation interrogations techniques without legal safeguards; and the prisoners who are forced to play a terrible high-stakes game with traumatic consequences. Economic violence is evident in the PD models' maximisation and minimisation techniques (matrix payoffs 0 and -3 or 5, depending on the game) and the prison is a workplace of violence.

- Economics is confirmed as a religion and the PD models are symbols of economic morality. Only, they fail to meet other economic principles and are "symbolic" of economic immorality.

- The PD models inaccurately reflect the South Australian legal environment and presumably other Western legal environments. Legal theory confirms legal safeguards are necessary but the researcher finds them detrimentally ignored in the PD models.

- Imprisonment is shown to be non-deterrent while being a place of violence, trauma and the absence of law: an educational and training facility for violence and a major cause of increasing crime.

- Economic violence and binaries, and associated socio-economic factors, are shown to be the true causes of crime embodied in the "criminal" and require urgent cultural change.

- Interrogations cause Post-traumatic Stress Disorder and prisons cause and worsen it.

- No legal representation results in interrogatees being made to confess inappropriately. It appears without legal representation, more serious charges may be laid and "offenders" serve lengthier prison sentences. Furthermore, the strength of evidence and presumably the understanding of facts are manipulated in interrogations. This has serious ramifications for "justice".

- Interrogation trauma appears to remain in unrepresented interrogatees. The number of "innocent" interrogates is unknown. Legal processes occurring behind public scrutiny are highly questionable.

- Views on the strength of evidence are the pivotal factor in confessions. Regardless, this adds significant weight to sentence discounts operating as rewards in the reprehensible prison system. Questions still remain with regards to law enforcement maximising and minimising techniques and what influence this has on the interrogatees' views of the strength of evidence and whether confessions are distortions based on the "manipulation" of evidence.

2. Secondary Findings:

A. Mathematical Modelling Research Findings

- Human models of behaviour should incorporate the "human". Otherwise, such models are likely to be exploitatively, harmful and dangerous.

- Empirical studies and relevant multiple disciplinary research should be factored into human relevant mathematical models. This aids to sever the link between mathematical abstraction and economic immorality.

- Mathematical models contain express and implied moral arguments that should be subjected to scrutiny and criticism.

- Creative Writing research and mathematics both engage in "modelling" processes.

- The new PD model developed by the researcher has the potential to effectively reduce and or eradicate crime through the adequate management of "overbearing influences", hence, aid in the creation of a peaceful society.

B. Transdisciplinary Studies Research Findings

- Transdisciplinary frameworks effectively enable researchers to examine complex real world problems and find solutions, and should be considered the method of choice for examining complex questions that span multiple disciplines.

- Transdisciplinary studies are designed for immediate real world impact and have the capacity to make fundamental and valuable change.

- Transdisciplinary studies enable existing research to be re-examined from multiple perspectives to determine the strengths and weaknesses of the research, and opportunities for further research, while delivering original research in their own right.

- Transdisciplinary inquiry-based research draws on but surpasses discipline-based research. Transdisciplinary studies are nonetheless limited. This barrier can be overcome through Research-based Practice.

- Transdisciplinary studies draw upon a researcher's past studies, extra knowledges, skills and experiences.

- The transdisciplinary research structure is a "method" in its own right affecting the scope of the literature and the choice of methods. Other research frameworks fall into the same category.

C. Philosophical Research Findings

- The highest and most fundamental form of "knowing" or knowledge the researcher claims is multiple sensory knowing mediated through knowledge, data and their embodiment.

- Binary harms across society must be identified and eradicated.

- Mythologies may exist in all "human" models and such models must be subjected to scrutiny and criticism.

- Research should be examined for binary mythologies, which many be evidenced in "powerful seismic shifts" and standard research.

- Objective and subjective studies can contain biases, as evidenced through research choices and objective arguments may be made for subjective reasons.

<u>Research Products</u>

The original novella, PD model and thesis are the major products from this research. Other primary subcategories of research worth noting include Research-based Practice, the grounded theory development of Aristotle Knowledge Development Theory and Practice Research Theory, and the appendices research. A secondary subcategory again is the original research formed by formally connecting existing research to the PD models.

Chapter 2

Transdisciplinary Literature Review

<u>Introduction</u>

In this part, the researcher compares and contrasts transdisciplinary inquiry literature review methods with discipline literature review methods (Montuori 2013; Montuori 2005; Montuori 2010) for validating the former, the approach used by the researcher in this project. The researcher identifies the overpowering strengths of inquiries over discipline literature reviews with regards to solving complex research questions and provides a taxonomy in table form contrasting both approaches, which are otherwise lacking in the literature. Transdisciplinary studies have structure and limitations which will be overcome through the researcher's Research-based Practice research method. The phases of this transdisciplinary literature review are named and detailed.

1.2 Comparing and Contrasting Inquiry and Discipline Literature Review Methods

<u>The Inquiry and the Discipline Approaches</u>

Inquiry-based and discipline-based literature reviews both require researchers to categorise, synthesise and evaluate knowledge pertaining to research questions (Palmer 2011; Fam 2014; Smith 2011; and Hernandez 2020; Schryen, Wagner & Benlian 2015). Transdisciplinary literature reviews are "inquiry-based" (Klein, J 1990) (e.g. data is received and analysed

through formal methods: data that may include economic critiques, historical analyses, commentaries, maps, and structured interviews, field experiments, the development of frameworks, feedback, theory development and subsequent revision (Palmer 2011; Fam 2014; Smith 2011). This is a different approach to a collection, synthesis and contextual analysis of emerging and established "discipline-based" research findings. The inquiry-based transdisciplinary approach surpasses multiple disciplines and methods to holistically examine a research problem (Rosenfield 1992; Max-Neef 2005; Palmer 2011; Fam 2014; Smith 2011; and Hernandez 2020). "Literature" is defined broadly by the researcher for this research purpose to include all relevant knowledge. Researchers' non-academic knowledge, experiences and preferences are brought into transdisciplinary's "vast web" of interconnected relationships and "larger ecology of ideas" (Fabbri & Munari 1984; Morin 1991; Montuori 2013). Nevertheless, the boundaries of transdisciplinary research are limited by researchers' academic studies, knowledges, skills and experiences (Rosenfield 1992, p. 1351) unless developed during the research process. Alfonso Montuori perceives four "dimensions" to the transdisciplinary inquiry that differs from the discipline approach (Montuori 2013; Montuori 2005; Montuori 2010): transdisciplinary inquires are: 1. Inquiry-based rather than discipline-based; 2. Integrate rather than eliminate the inquirer from the inquiry; are 3. Meta-paradigmatic rather than intra-paradigmatic; 4. Apply systems and complex thought rather than reductive/disjunctive thinking. Montuori has contrasted the fundamental strength and power of transdisciplinary inquiries over discipline approaches (Montuori 2013; Montuori 2005; Montuori 2010).

1.3 Contrasting Three Transdisciplinary Literature Review Approaches and Introducing Research-based Practice

Introduction: Three Australian transdisciplinary studies were chosen for review to highlight the breadth, depth and limitations of transdisciplinary literature reviews. This section guides and justifies this researcher's subsequent approach and fills a necessary inquiry and discipline contrasting literature reviews' knowledge gaps. A second gap is filled through the Research-based Practice research and literature review method, which provides for the incorporation of divergent knowledges and their fusion. These methods direct and shape the knowledge content incorporated in this thesis, and the research analysis and findings across all research products.

Methods: This study uses Textual Analysis and Critical Theory methods to assist in deconstructing the transdisciplinary studies and with reference to the research tasks, processes and goals as identified. Spontaneous grounded theory was used to develop the theory as implied.

Transdisciplinary literature reviews analysis: Palmer's (2011) holistic study on aging and life story ethnography's relevance for social-ecological systems, accommodates literature regarding: public commentary, NVivo and program data, statistics, economics, social deconstruction and historical analysis, the impact of war, "assigned" sex discriminations, race and ethnicity, traumatic recollections and interpretative frameworks, which situates the researcher's data and findings. Fam's (2014) study focuses on people and practices in innovations and transitions in sanitisation, and concerns: historical perspectives, engagement evidence including end users, in-the-field trials and best practices, semi-structured interviews,

reflective workshops and the drawing-together of different layers of complex research. Hernandez's (2020) study concerns the effectiveness of policy responses to deforestation, and provides research that includes: legal obligations referencing five legal systems, essential commentary, international agreements, government policy, economics, trials, robust evaluation, history, settlement, pastoralisation, regrowth, historical analysis, statistical analyses, policy relevant analyses, biological data, statistics, models and experiments, figures, maps, charts, graphs and photographs. The researchers had undertaken substantial relevant research, quoted relevant articles, used narratives to contextualise their research and methods and approaches adopted, and utilised miniature literature reviews moreso than simply a main literature review and often conducted literature reviews across multiple disciplinary knowledges.

Findings: This transdisciplinary study informed the researcher that transdisciplinary literature reviews may be quite varied. "Literature" data in the literature reviews was widely interpreted and factored disciplinary, formal and informal knowledges. Significant analysis, findings and discussion occurred in the literature review sections, and main methods were highlighted where possible. Multiple chapters were included which referenced unique applications for methodologies and methods, research, analysis and discussion, all highly relevant to addressing research questions; all relevant to thoroughly investigating the research subjects from different angles (Palmer 2011; Fam 2014; Hernandez 2020). This study shows that transdisciplinary research contains figures, tables, charts, graphs, models, theories, maps, graphs and the like and unique research and research methods' approaches. The researcher found that Montouri's four characteristics of transdisciplinary studies (Montuori 2013; Montuori 2005; Montuori 2010) existed in all three research projects. The transdisciplinary researchers were able to address complex research problems. The researcher envisaged that

solo transdisciplinary researchers may seek assistance from multiple academic sources, as necessary, given that the literature, methodologies and methods are diverse. The transdisciplinary studies inform the researcher that transdisciplinary studies are "applied" and have immediate real-world applications, sharing this same similarity with engineering research.

Limitations: The scope of transdisciplinary projects may be broad or narrow (Palmer 2011; Fam 2014; Hernandez 2020) as necessary for answering complex research questions: this occurs in degrees in different research sections and implies transdisciplinary researchers apply transdisciplinary scope restrictions. The rationale for this may include necessary academic rigour within time limits and researcher preferences but hypothetically skill acquisition timeframe limitations. Transdisciplinary theses containing multiple divergent knowledges are difficult to locate and are not the norm but are relevant to this researcher's transdisciplinary PD models' research which is likely to contain highly divergent knowledges. The researcher shall develop a new research and literature review method with wider applications to enable divergent transdisciplinary knowledges to be incorporated and "fused" as required. The researcher calls this method Research-based Practice.

Conclusion: The breadth, depth and limitations of transdisciplinary studies vary and as necessary for researchers to address their complex subjects. Academic and non-academic knowledges can be contained in transdisciplinary literature reviews. Broad to narrow interpretations of what constitutes transdisciplinary literature occurs. Transdisciplinary studies may contain disciplinary structure and data-source types. The inquirer is implicated in the research rather than "falsely" eliminated (Montuori 2013; Montuori 2005; Montuori 2010). Notwithstanding this, it is necessary to develop a new research and literature review

method to incorporate and fuse divergent knowledges necessary for the holistic examination of the complex PD models subject.

1.4 Tabled Comparison and Contrasting of the Transdisciplinary Inquiry-based Approach with the Discipline Approach

Introduction: Spontaneous grounded theory, empirical observations and textual analysis enabled the researcher to identify and distinguish key comparisons and contrasts between inquiry and disciplinary literature review methods, as evidenced in bibliographic referenced materials. The researcher begins with categorising the discipline-based approaches and adds to them in inquiry-based approaches; then considers Research-based Practice's contribution. The results are contained in the following tables.

Table 2.1: Discipline-based Methods for Literature Reviews – a Practical Approach

Introduction Sections	Main Body Sections	Substantial Literature Reviews	Miniature Literature Reviews
Cites Literature in the Field or Fields	Conclusion Sections	Formal	Identifies Research Gaps
Summarises Existing Research	Compares Research Findings and Approaches	Connects Research Approaches	Contrasts Research Approaches
Critiques Knowledge	Argues from One or More Positions	Groups Knowledge	Categorises Knowledge
Integrates Knowledge	Evaluates through Analysis and Discussion	Synthesises Research	Justifies the Original Research
Variable Data Types	Experimentation to Obtain Knowledge	Limited Discipline/s	Separation of Knowledges
Methodologies and Methods Split or Joined	Limited Study	Limited Literature Focuses and Sections	Inquirer Implied

Table 2.2: Inquiry-based Methods for Literature Reviews – a Practical Approach

Selected Discipline/s and Other Methods	Complex Problems and Processes	Multiple Disciplines Engaged	Multiple Disciplinary Literature Sections
Multiple Disciplinary Knowledges	Multiple Methodologies and Methods	Multiple Analysis, Discussion, and Results	Broad Study and Boundaries
Surpasses Discipline Boundaries	Disciplinary, formal and informal knowledges, and "knowing"	Academic and Non-Academic Knowledges	Multiple Disciplinary Skills
Experiential and Organic	Immediate Applications	Cultural Change Orientated	Moderate and Miniature Literature Reviews
Multiple Supervisors and Trainers	Multiple Resource Access	Researcher Preferences a Foremost Consideration	Inquirer Accommodated

Table 2.3: Inquiry-based Methods Joined with Research-based Practice

Selected Inquiry Methods	Divergent Knowledges Included	Divergent Knowledges Fused	Broadest Study Findings' Implications

Discussion: Discipline researchers may adopt specific discipline approaches depending on the research questions, the methods necessary to achieve the research goals, literature review findings, common disciplinary approaches and preferences. Transdisciplinary inquiry researchers may utilise any or all of the discipline approaches, but surpass them as indicated. Inquirers may merge or uniquely combine discipline literature review approaches, which the researcher found applied in the earlier transdisciplinary projects' analysis. Research-based Practice surpasses structural limitations the researcher earlier found in transdisciplinary research, enabling the incorporation and fusing of divergent knowledges where necessary, which is the researcher's potentially preferred approach.

The researcher further finds that literature reviews are a "text-type" assisting readers to understand the strengths and weaknesses of "the whole body of available research on a topic" (Rhoades 2011, p. 61; De Los Reyes & Kazdin 2008). They are highly structured and signposted, include the researcher having to introduce, identify and distinguish findings or views commonly or less commonly held, and show research gaps and ways the researcher will fill them, and stress to readers and examiners the knowledge the researcher needs them to know. Literature reviews are designed for different purposes and in different ways. Literature reviews are "narratives" that tell a particular "story" and should be congruent with narratives across research structures and the overall thesis narrative. This supports the view that

research are academic "conversations", narratives on the narratives of group or singular academic findings and views directed towards academic communities.

Good literature reviews provide a summary of knowledge in an area, compare and contrast trends and nuances. They show that the researcher has read relevant the literature and is knowledgeable in the field. Literature reviews are also written for those who do not know the field. Moreover, literature reviews contextualise new research. Like all literature reviews, generally, this researcher's literature review shall include information as appropriate focusing on:

- ➤ broad literature
- ➤ narrow literature
- ➤ trends in literature
- ➤ nuances in literature
- ➤ similarities and differences
- ➤ limitations of research
- ➤ research gaps
- ➤ filling research gaps

1.5 Phases of this Transdisciplinary Literature Review

Introduction: This transdisciplinary literature review is necessary for identifying Creative Writing and PD models' research gaps, and provides original research, which urge for extensive investigations into the PD models specifically and concrete findings to be

generated. Furthermore, the researcher connects existing research to the PD models formally, filling additional research gaps. This researcher's literature review is expected to demonstrate a need for both an original novella and PD model. The following knowledge shall be threaded into the novella's structures and themes. Research-based Practice shall enable divergent knowledges to be incorporated and fused, furthermore supports an upward shift of knowledge generated in this transdisciplinary review into all other research products. The main influences in this transdisciplinary literature review follow:

Figure 2.1: Influences in this Transdisciplinary Literature Review
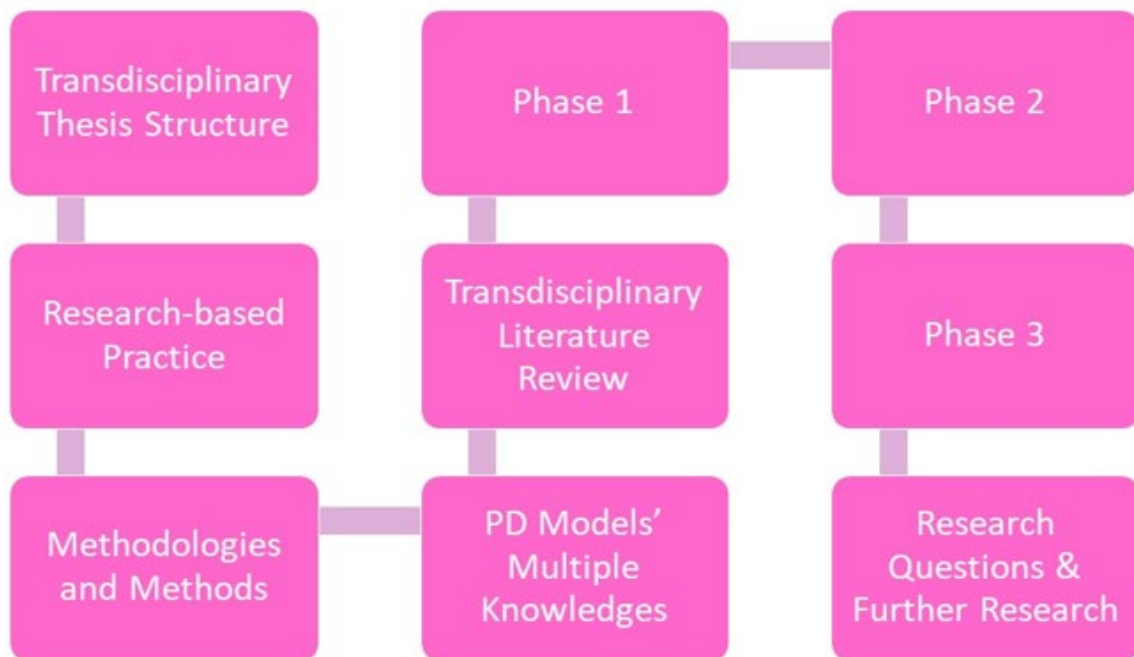
Phases of the Transdisciplinary Literature Review

There are 3 phases and 9 sections in the following literature review. The researcher highlights and addresses research gaps in each section. The following phases and sections in this transdisciplinary literature review are:

Phase 1

Section 1: Research Gap Information – The Disciplinary Debate Insufficiency

Phase 2

Section 2: Research Gap Information – Creative Writing Science Fiction Limits

Section 3: Research Gap Information – Creative Writing PD Models' Deficit

Section 4: Research Gap Information – Creative Writing Legal Models' Deficiency

Section 5: Research Gap Information – Creative Writing and Binaries Inadequacy

Phase 3

Section 6: Research Gap Information – Economics Shortage

Section 7: Research Gap Information – Law and Legal System Slippage

Section 8: Research Gap Information – Crime and Psychology Shortfall

Section 9: Research Gap Information – Empirical and Field Experiments Lack

Discussion: The knowledge development approach adopted by the researcher in this transdisciplinary literature is explained by reference to the researcher's key actions in the following phases:

Phase 1: Introduces the debate concerning game theory and the PD models' implied limitations, which leads to the research questions.

Phase 2: Identifies Creative Writing in science fiction identifying where this deluminating PD models' work might sit, and the need for a new PD model and creative work. Additional consideration is given to the breadth and limits of Australian Creative Writing on legal system models. Furthermore, the need for supplementary research with regards to non-binary writing is raised. The result is that an original novella and PD model are necessary.

Phase 3: Brings auxiliary economics analysis, theory and morality to examining the nature of the PD models, as well as relevant law and legal system knowledges, and psychology, including interrogation, imprisonment and trauma knowledges. These, as well as empirical and field experiments shed further light on the need and shape of the original novella and PD model.

Conclusion: This transdisciplinary literature review will highlight research gaps and link existing and original research towards the holistic examination of the PD models. The original novella and PD model will be introduced in this original thesis. Research-based Practice will enable the breadth and depth of divergent transdiciplinary knowledges to be incorporated and fused.

Figure 2.2: Overview of this Transdisciplinary Literature Review Structure
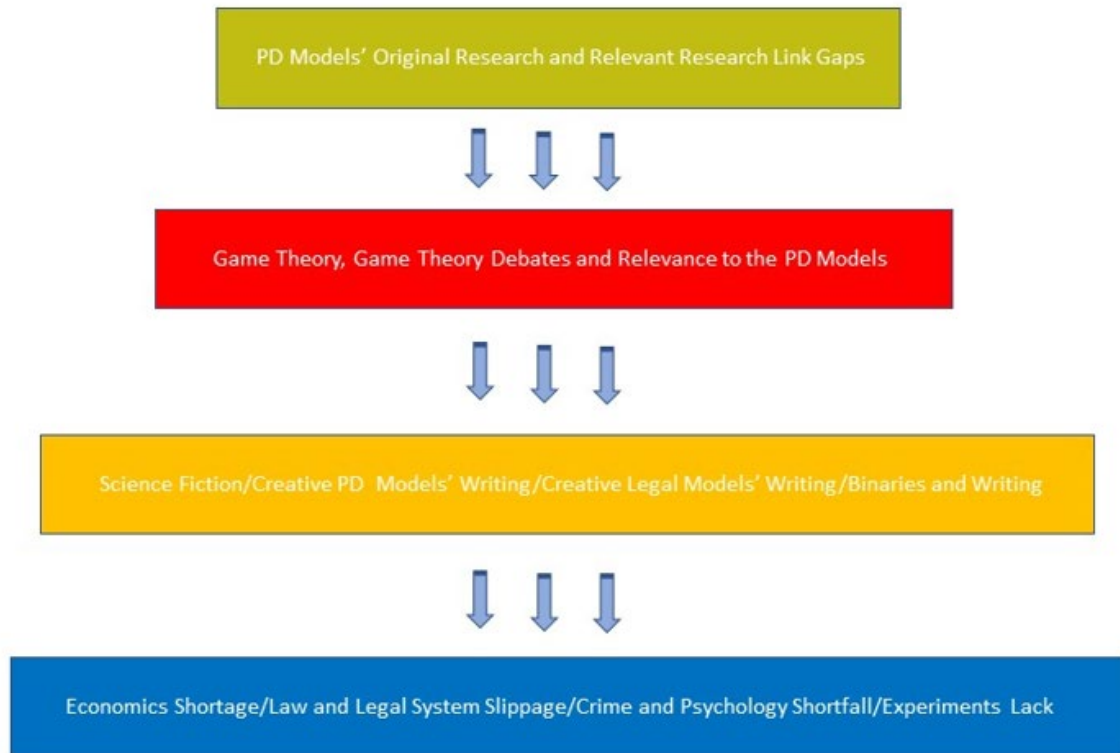
Phase 1

Section 1:   Research Gap Information – The Disciplinary Debate Insufficiency

Introduction: In this section, the research scope of literature shall be the economics relevant to the game theory debates concerning the validity of game theory's pursuit of modelling human behaviour. This broad topic is narrowed to the validity of PD models. The gaps in this research shall justify this researcher's original transdisciplinary research. The research questions and the research objectives of developing an original novella and PD model will be identified.

Methods: The methodologies and methods that the researcher uses in this section to identify and analyse appropriate research, are from: Textual Analysis, Critical Theory, Trauma Theory and Gender Theory.

Research/Analysis: Game theory is defined as "The branch of mathematics concerned with the analysis of strategies for dealing with competitive situations where the outcome of a participant's choice of action depends critically on the actions of other participants. …" (Oxford Dictionary 2022). *Background*: Essentially, the PD models' scenario fits one where alleged accomplices are presumed guilty of a serious offence and found guilty of less serious offence. Both are offered a get out of jail free card if they confess and act as a witness against the other. The twist is both confess and both serve greater time in prison as a result than if they had remained silent. The example usually indicates the selfishness of the interrogatees and that their bargains are foiled, and that law enforcement have secured greater prison terms

for them both. The model suggests prisoners will always make the same choice and that policy can be designed to cause this to happen. This is a very poor outcome for the prisoners. The automation of human behaviour continues with the IPD model that predicts, after a number of PD model scenarios unravelling, that interrogatees eventually realise that remaining silent is the best outcome: for example with the "players" of the "game" cooperating eventually, they effectively serve a lesser prison term. This is an attempt to automate or derive the "best" outcome for interrogatees and prisoners rather than find them going promptly to prison and serving longer prison sentences.

In grouping the literature themes relevant to this argument and these findings, and examining trends, contrasts, nuances, and gaps, I begin by noting that game theory has been applied in a range of human automation settings. Game theory has been applied to computer assembly (Yu et al. 2012); robot-robot interactions (Lavalle 1995); human-robot interactions (Li et al. 2016); automated negotiations (Binmore & Vulkan 1999); automated versus human pilots (Brat 2022); predicting pilot behaviour (Yildiz, Agogino & Brat 2014); shared human-computer driving (Wang et al. 2020). Many studies indicate early developments and suggest significant limitations (and particularly in relation to modelling the complexity of human behaviours) (Lavalle 1995; Li et al. 2016; Binmore & Vulkan 1999; Brat 2022; Yildiz, Agogino & Brat 2014; Wang et al. 2020). Game theory appears to be chosen in limited programming applications, but is highly informative in the game development space, not for adherence to the rigour of game theory scenarios per se, but for gaming strategies. That said, game theory choices and results are generally fixed from the outset when compared to the unpredictability of real life human interaction and choices. As Li et al. (2016) notes:

The human-robot interaction behaviours can be more complex than just coordination, which is a specific case studied in this paper. Nevertheless, it is important to note that a higher-level decision mechanism must be specified beforehand if the robot is expected to perform more complex interactive behaviours. The proposed method can only make the robot adapt to different human inputs based on a prescribed goal ("coordination" in this paper). This goal can be set by the designer based on priori knowledge of a task or through a certain learning method.

(Li et al. 2016, p. 9)

Computer modelling of human decision-making is strongly evident in game theory: e.g. non-cooperative farsighted stable set with at least one cooperative outcome, in an n-player prisoner's dilemma game, allowing individual deviations with full knowledge of a chain of subsequent deviations by other players (Nakanishi 2009); riskiness of cooperation in the infinitely repeated discounted IPD model game (Blonski & Spagnolo 2015). But recently, and interestingly, cooperation arising is considered a rational choice in an "expected" game (Arend 2020).

As Richard Arend notes:

Currently, there is no satisfying answer to how cooperation arises rationally in a single-play prisoner's dilemma game with complete information. When player types are known, as well as payoffs and actions, economic analysis through payoff-optimizing computation does not provide a clear path for cooperation. We propose a new form of game–the 'expected' game–and illustrate its implications for theory and practice based on the prisoner's dilemma example. We prove that cooperation can be a rational choice for players in reality in such games defined by a weighted set of payoffs of two or more different reference games.

(Arend 2020)

All of the games involve artificial fixing of the results outright or otherwise. It is noted that economics generally appears to be struggling to fit real-life into neat modelled outcomes, except on a limited one-model-at-a-time basis, which provides little cohesion in this disciplinary area, in real-life, and results in theories and games of limited usefulness. Yet, arguments are that the PD models reflect real life artificially and stimulate real-life decision-making. But the results appear to fix selfishness generally and what this means holistically has not been examined for the PD models before now. The researcher plans to fill this gap.

Economic Debates: Samuelson qualifies the fixed view of game theory by noting some game theory models seem to more successfully represent the real world (Samuelson 2016, p. 121). Indeed, in the economics discipline the debate goes deeper with some economists suggesting the PD model reflects real life in a very limited way and liken it more to a "game" (Poundstone 1992, pp. 116 – 120). There are economists who suggest game theory will amount to little (Syll 2018; Sugden 2000; Morgan 2001). Sugden argues that theoretical economics "describe counterfactual worlds which the modeller has constructed" (Sugden 2000). Syll suggests game theory is in trouble:

> What is lacking in the overly simplistic mainstream view on using mathematical modelling in game theory is an ontological reflection on the conditions that have to be fulfilled for appropriately applying the methods of mathematical modelling. ... On a deep level, one could argue that the one-eyed focus on internal validity and consistency make game theory irrelevant since its insistence on deductive-axiomatic foundations does not earnestly consider the fact that its formal logical reasoning, inferences and arguments show an amazingly weak relationship to their everyday real-world equivalents.
>
> (Syll 2018, p. 48)

And further comments that:

Nash equilibrium has since it was introduced back in the 1950's … come to be the standard solution concept used by game theorists. The justification for its use has been mainly built on dubious and contentious assumptions like 'common knowledge' and individuals exclusively identified as instrumentally rational. And as if that was not enough, one actually, to 'save' the Holy Equilibrium Grail, has had to further make the ridiculously unreal assumption that those individuals have 'consistently aligned beliefs'—effectively treating different individuals as incarnations of the microfoundationalist 'representative agent.

(Syll 2018, p. 50)

Despite this finding of "automatic" and "artificial" "– ness", game theory and the PD models surprisingly continues to motivate other real-life decision-making (e.g. auction decisions: Klemperer 2004; management decisions: Spurný et al. 2021). It is a serious issue the PD models may influence legal processes and decision-making and therefore urgent research is required to determine to what extent this may be occurring. At present, no holistic transdisciplinary study has been conducted to examine relevance, effect and motivations of the PD models, but will be examined in this thesis. The researcher leaves open the possibility of rejecting the PD models and developing an original PD model during this research process and furthermore, shall write a novella that efficiently explores the impact of these research findings. Game theory functions on a narrative story level and it is appropriate to examine the PD models through Creative Writing research (de Ley 1988; Deloche & Oguer 2006; Mozaffari & Eghbal 2020). Producing a creative text from this original research makes sense from a Creative Writing research perspective.

The research questions therefore will be:

1. What transdisciplinary knowledges may assist the researcher in deconstructing the PD models?

2. How do the PD models operate in real life and what problems are identified?

3. Is there scope for an original novella and PD model?

4. What implications are there for Creative Writing research and academic research generally?

Multiple disciplinary influences are contained in the PD models. Due to the highly contentious ground that the PD models occupy, the researcher shall critically deconstruct them using relevant multiple disciplinary research in the following categories:

- creative writing narratives: contained in the PD models' stories

- binary criticism: the players, choices, explicit and implied assumptions

- economics and mathematics: the PD models' modelling environment

- law and legal processes: expressed in the PD models' concepts

- psychology: behavioural decision-making, through subject choices, and

- empirical studies: since the PD models purport to model real life

These influences shall form the relevant perspectives the researcher will use to assess the contribution and positioning of the PD models. The development of an original PD model will occur if appropriate. An original novella reflecting the results of this project will be written. The relevant transdisciplinary knowledges stated will come to bear on the PD models, in the following sections.

Conclusion: The potential for the PD models to impact on prisoner outcomes makes research into their nature extremely urgent. No transdisciplinary study with highly divergent knowledges and perspectives have has brought to bear on the PD models. No satisfying explanation or examination of the PD models has been produced to this day. It is fitting for the researcher to assess whether the PD models are valid as they stand, or whether an original PD model is required.

Phase 2

Section 2: Research Gap Information – Creative Writing Science Fiction Limits

Introduction: In this section, the research scope of literature shall be science fiction works that validate the science fiction novella concept as a vehicle for examining social change, the broad topic, and economics and game theory being the science fiction subject of choice, the narrow topic. The gaps in this research shall justify this researcher's research and comprises a contribution in this research space. The knowledge generated in this section will be examined in the original novella and development of the original PD model.

Methods: The methodologies and methods that the researcher uses in this section to identify and analyse appropriate research, are from: Textual Analysis, Critical Theory, Trauma Theory and Gender Theory.

Research/Analysis: *Definition*: of science fiction is:

> [A] literary and narrative approach to the future, involving plots, story lines and action sequences, specific settings, dramatic resolutions, and varied and unique characters, human and otherwise. It is imaginative, concrete, and often highly detailed scenario-building about the future set in the form of stories.
>
> (Rukeyser 2015, p.1)

"Science fiction addresses all the main dimensions of the future and synthesizes all these dimensions into integrative visions or scenarios of the future" (Rukeyser 2015,

p.1). Science fiction generates a "holistic" future consciousness, contains secular-rationalist and mythological-romantic themes, and weaves together theory and abstraction (Rukeyser 2015). The genre allows for the retracing of underlying mythologies and discrete myths (Sutton & Sutton 1969; Disch 2005). This original novella and thesis shall unravel the PD models' binary mythologies and further, shall address binary mythologies in the world. Other relevant scientific science fictional mythologies will be examined when developing the science fiction story. The themes covered in this section will be addressed in the original novella.

Gwen Ansell (2019) notes that science fiction models the futuristic and anticipates or inspires new technologies (Ansell 2019): Victor Appleton inspired the taser gun through his novel *Tom Swift and His Electric Rifle* (Appleton 1911); Ralph Gernsback, video calling in *124C 41+: A Romance of the Year 2660* (Gernsback 1950; first printed 1911). The researcher will portray the futuristic effects of the PD models and other research products in a science fiction novella.

Science fiction may also reflect, interrogate, satirise, and judge models of the world right now, and asks, "What if the world was to change?" (Ansell 2019). Kim Robinson critiques global warming in *New York 2140* (Robinson 2017); Ann Leckie, a world without gender in *Ancillary Justice* (Leckie 2013); Nnedi Okorafor, true racial freedom in *Who Fears Death* (Okorafor 2010). The researcher will examine the PD models' impacts and a planet without binary influences.

The impact of economics and regulation features prominently in science fiction. Richard Morgan, examines the bloodied market forces in *Market Forces* (Morgan 2005);

Xia Jia, capitalism in *Tongtong's Summer* (Jia 2014); George Orwell, the dystopian now and future in *Nineteen Eighty-four* (Orwell 1949); Herbert Wells critiques colonialism in *The War of the Worlds* (Wells 1978) (Ansell 2019); Bruce Sterling investigates corporations that run cities in a partial economic collapse in *Distraction* (Sterling 1998); Cary Neeper, a world with a steady-state green economy and what happens when a selfish antagonist upsets the common good in *The Webs of Varok* (Neeper 2012); Charles Stross, a meta-human robot in a futuristic economic framework and financial system designed by the author to pay for space colonisation, in *Neptune's Brood* (Stross 2013); Hannu Rajaniemi considers the broad impact of the existing PD models in *The Quantum Thief* (Rajaniemi 2011). Creative writers in science fiction conduct thought-based scientific and reality experiments, explore and develop new science and social science theory and applications which are logical, scientific and applied. The researcher will critically deconstruct the PD models and if appropriate produce an original PD model, and appropriately in the context of removing selfish binaries and promoting positive economic morality and will reflect the same in an original novella.

Science fiction questions existing normative models and presents or argues for new norms and hence cultural change. By focusing on highly problematic areas of reality and presenting alternative versions of reality, readers experience reality in different ways and discover new meanings and embodied truths. Margaret Atwood, addresses the systemic suppression of women in *The Handmaid's Tale* (Atwood 1939); Anthony Burgess and Stanley Hyman's science fiction portrays psychiatric delinquents and crime in *A Clockwork Orange* (Burgess & Hyman 1963); Philip K. Dick, addresses the awful Tyrell Corporation in his novel *Blade Runner: Do Androids Dream of Electric Sheep?* (Dick 1968); Gene Wolfe, prison torture in *The Shadow of the Torturer* (Wolfe & Nix 2016). George Orwell, unravels surveillance in

Nineteen Eighty-Four (Orwell 1949). All of these themes will be fused in the researcher's novella and in very unique ways, making the original novella a brand new cultural product.

Science fiction explores pertinent religious and moral questions, and the researcher will link the novella to the concept of "economic morality", a concept developed herein. George Annas writes, it was "Jorge Luis Borges, for example, who first suggested that humans could become immortal if they were willing to have all of their bodily functions performed by machines" (Annas 2016, p. 5p). Annas (2016) further writes "Science's crusade no longer seeks eternal life with God, but eternal life on earth. In decoding the human genome, religion is again the cover story, as scientists speak of the genome as the "book of man" [sic] and the "holy grail" of biology" (Annas 2016, p. 5u). Religion and science may merge in the researcher's creative science fiction work. Roger Zelazny, combines magic, science and politics in overthrowing false Hindu-inspired gods in *Lord of Light* (Zelazny 1967); John Boyd, theorises a Jesus Christ who is a revolutionary figure, was not crucified, and through force establishes theocracy in *The Last Starship from Earth* (Boyd 1968). This researcher shall fuse this knowledge in this research project to deconstruct society and eliminate binaries, and in so doing shall explore the concept of a scientific form of God.

Conclusion: The science fiction genre is an appropriate genre to explore current and future societal change. The researcher will fuse the themes in this section of this transdisciplinary literature review in the researcher's original novella. The original novella envisioned by the researcher, shall address selfish binaries and economic morality, which have not been overtly combined before, as envisioned. The researcher shall fill these research gaps.

Introduction: In this section, the research scope of literature shall be the focus on game theory and especially the PD models in literature including beyond science fiction by reference to specific texts, broadly, and an in-depth analysis of two Creative Writing research findings on the PD models, narrowly. The gaps in this research shall justify this researcher's research and comprises a contribution in this research space and links findings to the PD models. The knowledge generated in this section will be in examined the original novella and through the development of an original PD model.

Methods: The methodologies and methods that the researcher uses in this section to identify and analyse appropriate research, are from: Textual Analysis, Critical Theory and Trauma Theory.

Research/Analysis: Game theory and the PD models' logic are the focus of storied fiction, primarily from the education, plot and character strategies perspective (Richard Power's _Prisoner's Dilemma_ (Powers 2002; first published 1988); _A Beautiful Mind_ (Nasar 1998; creative non-fiction); Hector Macdonald's _The Mind Game_ (MacDonald 1995); Trenton Stewart's _The Mysterious Benedict Society and the Prisoner's Dilemma_ (Stewart 2009); Hannu Rajaniemi's _The Quantum Thief_ (Rajaniemi 2011); Barry Jonsberg's _Game Theory_ (Jonsberg 2016); William Lange's _Game Theory_ (Lange 2018); Colleen Cross's _Game Theory_ (Cross 2021)). Metal health (Nasar 1998; MacDonald 1995) is a feature as well and in high-tech settings (MacDonald 1995; Rajaniemi 2011). Most stories involve crime, where game theory and the PD models stand for strategy that can help or hinder you, inspired by the PD models' narratives. Games occur in real-life and the prisoner's dilemma often occurs in

highstakes settings, often with "criminals" and positions of power, and conspiracies. Such are presumably the binary games of life, and these aspects will be further explored and developed in the researcher's novella.

Two international prisoner's dilemma works analysed for views on the PD models' binary game: Rajaniemi's (2011) science fiction work concerns a virtual-thief prison-inmate, a Jean le Flambeur copy, who suffers trauma in an IPD prison and incredible futuristic world. The IPD games in prison lead the protagonist towards death: e.g. "Sometimes we are soldiers trapped in trench warfare … If they shoot and I don't, I'm screwed. If we both shoot, it hurts a little. If we cooperate, it's Christmas for both … Except there is always an incentive to pull the trigger" (Rajaniemi 2011, p. 3). Pain and death-living-dying is a constant shadow in the IPD world. IPD virtual pain in the prison is described as "the feeling of hot metal, entering [his] skull and exiting through the back of [his] head … A burning train" (Rajaniemi 2011, p. 2). Death is close constant for Jean le Flambeur: "A hand made of glass brushes my cheek, just as my stimulated brain finally decides it is time to die" (Rajaniemi 2011, p. 8); and "I never wanted to die in a prison, a dirty place of … beatings" (Rajaniemi 2011, p. 9); and ""Deep breath. Everything hurts. The scale of things is wrong … A hole in my stomach, burning, churning" (Rajaniemi 2011, p. 10). These narratives suggest a rejection of the rationality underlying the PD models' imprisonment as a viable preferable choice. Rajaniemi suggests that a prisoner under the PD models becomes traumatised, and does not have a choice in playing the game. Jean's salvation comes in the form of a prison break: "Congratulations … she says … You have escaped" (Rajaniemi 2011, p. 11). This suggests that PD models are not the only games that can be played, and on the one hand is a further rejecting of the PD models' assumptions and on the other an IPD scenario. Jean finds that a life of crime is what awaits him in a high-tech elaborate world, which is a place of

entrapment and trickery, containing prisoners' dilemmas almost at every turn: e.g. "I stand in the robot garden with my old self, weighing the gun in my hand. He is holding it too …" (Rajaniemi 2011, p. 297). The protagonist's savours require him to commit a major heist: there is no end to selfish dilemmas because the selfish binaries are everywhere. Rajaniemi explores the relevance of the PD models acutely and expertly in his novel, but does not find a viable alternative to the PD models.

Powers' (2002) novel begins with Eddie Hobson, a terminally ill man, who examines the PD model and educates his family about its complexity, considers the PD models real world applications particularly in his own life and searches for a solution. Powers expertly shows readers that the PD models' motivations exist everywhere in the world and links them to key institutions and officials: past employment, war, government, and even the judiciary.

The PD models' motivations are implicated in real-life harms though harmful tit-for-tat strategies that play out in Eddie's Hobstown story and his own experiences: "On every side we hear nothing but 'So-and-so is dead' or 'So-and-so is dying.' And if there were anyone left to weep we should hear nothing but piteous lamentations … ." (Powers 2002, p. 332).

And:

> For all the hoopla of Victory, Eddie now sees that the war has decided nothing. It continues: that much is obvious, even in Silly Symphony. It simply changes from massive stroke to slow cancer. It spreads from titanic fronts to steady bushfires smoldering everywhere he looks across the earth's fragile crust. 'Does it never end?'
>
> (Powers 2002, p. 309)

Power's (2002) too rejects the PD models' binary selfish assumptions as an ongoing struggle for selfishly pitting human-against-human and human-against-nature, while Eddie seemingly "chooses" to exit the game. Power's research finds and rejects selfish binaries in culture. Powers also supports Rajaniemi's view that the implications of the PD models' motivations are they cause suffering, injury and death, and significant civil unrest. This research may validate Rajaniemi's and Power's views on the impact of the PD models. The researcher shall contrast the PD models with an original PD model in the novella, the former implicated in death and destruction, the latter in freedom and life.

Conclusion: The PD novels have inspired Creative Writing research and storylines, with some writers focusing on them as causes of suffering and hindrances to freedoms, all of which are evident in the PD models. The researcher finds that more can be done to flesh out the impact of the PD models and their selfish binaries on society in different ways to Rajaniemi's (2011) and Power's (2002; circa 1988) stories. This then is a gap that the researcher will address in the original novella, PD model and thesis.

<u>*Section 4*</u>:   Research Gap Information – Creative Writing Legal Models' Deficiency

Introduction: In this section, the research scope of literature shall be Australian prison literature, the broad topic, and questions of justice and injustice, the narrow topic. The gaps in this research shall justify this researcher's research and comprises a contribution in this research space. The knowledge generated in this section will be examined in the original novella and development of the original PD model.

Methods: The methodologies and methods that the researcher uses in this section to identify and analyse appropriate research, are from: Textual Analysis, Critical Theory, Trauma Theory and Gender Theory.

Research/Analysis: Australian crime fiction of justice and injustice marries with the PD models' concepts of "criminals" being outwitted by laws and legal processes (Marcus Clarke's *For the Term of His Natural Life* (Clarke 2009; first printed 1871 – 1872; Michael Meehan's *Below the Styx* (Meehan 2010); James Phelps's *The Inside Man* (2021); Anthony Hill's *The Last Convict* (2021)). Memory and murder and claims of innocence occur on one side (Meehan 2010; Phelps 2021), and injustice and harsh prison treatment is evident on the other side of this category (Clarke 2009; Hill 2021; Phelps 2021); furthermore, prisons of cognition exist: pre-, during- and post- imprisonment (Clarke 2009; Meehan 2010; Hill 2021; Phelps 2021). All novels question the purpose and applications of Australian laws and legal processes.

Two Australian legal system works are analysed for views on Australian laws and legal system models: Clarke's (2009; 1870s written) novel starts in Britain and ends in Australia. It concerns the brutality of injustice and justice imparted on Rufus Dawes and other convicts. Rufus is a young man wrongfully implicated in the robbery of biological-father Lord Bellasis's, corps and murder (Clarke 2009, pp. 287 – 28). This follows a familial scene of violence, where Sir Richard Devine learns from his wife that his "son" is the product of adultery (Clarke 2009, p. 21) and casts Rufus out. Rufus Dawes is transported for life to Australia as a convict. Clarke highlights flaws with circumstantial evidence and findings of guilt and catapults the law as a ruthlessly blunt instrument, with the law focused on the appearance of justice rather than actual justice. Ultimately, the innocent Rufus Dawes is enmeshed in crimes and veers in and out of prison where he suffers trauma:

> For the first time for six years he had broken through the selfish misanthropy he had taught himself. And this was his reward! He had held his temper in check, in order that it might not offend others. ... If, while in the gloomy prison, distracted by a thousand fears, and weighed down by crushing evidence of circumstance ... .
>
> (Clarke 2009, pp. 176 – 177)

The physical and psychological cost of imprisonment on Rufus is devastating and Clarke suggests this is too high a price to pay. Legal process, the prisons, other prisoners and jailors all contribute to the trauma. This highlights the massive escalating negative personal costs of imprisonment. Similarly, Clarke details horrendous punishments directed towards other convicts:

He did so, and came into the yard, where Gimblett inserted the iron-wood gag in his mouth. The sound produced by his breathing through it (which appeared to be done with great difficulty) resembled a low, indistinct whistle. Gimblett led him to the lamp-post in the yard, and I saw that the victim of his wanton tyranny was the poor blind wretch Mooney. Gimblett placed him with his back against the lamp-post, and his arms being taken round, were secured by handcuffs round the post. I was told that the old man was to remain in this condition for three hours. ... Rufus Dawes hearing, when "on the chain" the next day, of the wanton torture of his friend, uttered no threat of vengeance, but groaned only. "I am not so strong as I was," said he, as if in apology for his lack of spirit. "They have unnerved me." And he looked sadly down at his gaunt frame and trembling hands.

<div align="right">(Clarke 2009, p. 392)</div>

Clarke implicitly argues in his writing for ethical familial relationships (noting links with emotional abuse and crime) and for legal system outcomes to be proportional to crimes; for the improved treatment of prisoners and for associated legal system change. Clarke does not present a new legal system model that may highlight alternative ways to treat prisoners. The difference between the appearance of law and the practice of law are shown to be two very different distinct things. Clarke presents a world where ideology collides with "piranhas in a blood bath"; where fairness collides with the adversarial system; where divine judgment and adversity are the same. Clarke identifies and challenges legal mythologies, finding them filled with curses and ironies.

Meehan's (2010) novel concerns the protagonist Martin Frobisher, who is a Marcus Clarke researcher and reader of Clarke's works, an historian and ex-lawyer who appears under the influence of Clarke's "dark" writing. This novel implicates the fundamental power of creative writing to affect motivations. The protagonist murders his wife, and claims to have been "provoked" by greatly overwhelming "character assassination":

It was only after I came across her rummaging in my black plastic bags that she first used the word. Martine Frobisher, as louse. The word 'louse', you see, has associations. It was an expression of my father. A louse was a person without principle. A human parasite.

(Meehan 2010, p. 2)

Familial "character assassination" is a form of domestic violence in and of itself an emotional violence, and should not justify criminal provocation. Prior to 1 February 2021, in limited circumstances, provocation was a defence to reduce a charge of murder to manslaughter and a factor for consideration in reducing a prison sentence in South Australia (s14B of the *Criminal Law Consolidation Act* 1935 SA; Legal Services Commission of South Australia 2022). However, Shiraev and Makhovskaya (2019) show that character assassination worsens mental health and causes significant suffering (Shiraev & Makhovskaya 2019). Negative interconnected cognitive, emotional and behavioural developments follow character assassination (Shiraev & Makhovskaya 2019, p. 36). Character attacks cause a range of emotions from anger to depression before passing (Shiraev & Makhovskaya 2019, p. 36). Decision-making, reputation, relationships, quality of life and mood is negatively affected (Shiraev & Makhovskaya 2019, p. 36). Reactivity and impulsivity occurs (Shiraev & Makhovskaya 2019, p. 37). Changes to individuals can be mild, moderate or even severe (Shiraev & Makhovskaya 2019, pp. 36-37). Character assassination can occur in many forms: e.g. constant direct attacks, public shaming and or indirect undermining and criticisms and at various strengths. Abusive traits, Post-traumatic Stress Disorder ("PTSD") and character attacks can be treated (Shiraev & Makhovskaya 2019), but acceptance and commitment therapy acknowledges the damage is challenging to correct and this type of harm is ongoing.

It appears the legal system is unable to respond to these findings. In Meehan's (2010) novel, one cannot help but see Martin, too, had been engaging in cognitive character assassination against his spouse for some time. These effects seem to have naturally resulted in churning disgust, bred hatred and ill will, conduct that grossly worsens relationships and leading people towards crime. This is unregulated under capitalism.

Significant social interventions were required for Martin and his spouse. Blanket social interventions and supports do not automatically apply in South Australia for this type of relationship dysfunction, in domestic settings or otherwise. The researcher questions what the world might look like if this occurred? Certainly, "domestic" violence conduct cannot be excused but otherwise such conduct appears as a "chain-of-events" with long history, the causal links for which are not always immediately "identifiable" and not adequately addressed. These concerns are largely omitted from policy, and are not factors that social or legal interventions adequately address, and ignore in the worst case.

Legal decisions, as moral messages, do not prevent trauma and its criminal manifestation from occurring. The legal and moral model of "free will" and "choice" becomes unstuck in the embodied and traumatised reactions of traumatised individuals. In this sense, legal processes are penalising people for their trauma. Criminality, in the researcher's humble opinion, requires greater degrees of social interventions and supports rather than simply addressing the outcome of significant policy failures. Potentially, all people in society are affected by this type of conduct and the list of "victims" are far broader. Conduct itself may be "embodied" through a number of "channels". "Objects" and "places" of violence need be catalogued and addressed. External causes of violence are commonplace and significant and destroy "choices".

Both Martin and his wife appeared trapped in their relationship, when separating was the best option. Women face significant welfare obstacles post separation, but new research shows men face high obstacles too (e.g. quality of life, life-long poverty, and unemployment unless re-"coupling" occurs (Gregory 2018; Qu & Weston 2020)). Rent stress and housing affordability becomes overwhelming for separated individuals (Gregory 2018; Qu & Weston 2020). These are significant risk factors and would add layers of stress and worsen choices and force people to stay together who are best to separate.

Appropriate accommodation and employment post separation should be absolutely sufficiently provided. The structural costs of separation linger on for a lifetime as trauma and homelessness can occur. A multifaceted approach to the way in which persons communicate is certainly warranted. The model of "individual fault" cannot continue to linger in the Western legal traditions and especially when the embodiment of harm is so rife and so obviously the cause of crime. Economic morality must improve because what is happening is economically immoral.

Coralie's parents are wealthy with new money, and this was an economic factor that kept Martin together with Coralie and indeed Coralie with Martin, in terms of stability and the prospect of future comfortability. Housing and employment should be made available?

Meehan focuses on the fallibility of mens rea for murder and manslaughter itself, however, digging deeper into legal system models' problems of culpability than Clarke does. The protagonist changes his mind when he is about to commit the heinous crime, but claims he could not stop the motion of the epergne striking his wife:

My defence, Your Honour. Was it me who swung the epergne, or the epergne, once set in motion, that swung me?

(Meehan 2010, p. 3)

This raises the question of how the legal system can accommodate changes of states of cognition and how culpability can be accurately determined through credibility, when research below shows this is an insurmountable barrier. Was the murder in effect accidental? Martin constantly stresses his innocence, but his guilt against the risk of imprisonment is questioned. The law must therefore be a crude blunt instrument and to survive must render popular decisions. This raises the issue of whether the law is a source of wrongdoing and impliedly not truly capable of assessing Martin's factual circumstances.

Meehan also shows how familial ethical and moral boundaries once crossed, for example in the cases of adultery and familial disgust, are "legal crimes" and signals of impending "unlawful crimes" (even though lawful - e.g. adultery, character assassination – involve moral crimes, true "crimes" of a universal nature: involving losses and having victims and perpetrators and cause upsets). Perhaps, a new quasi legal code of honour is warranted?

Meehan (2010) exonerates the legal system in the character of Rollo, a lawyer, and Martin's brother-in-law, the ever courteous victim of Martin's unethical and immoral conduct: Martin had an affair with Rollo's wife: "Rollo, in spite of everything, continues to visit me" (Meehan 2010, p. 234). Rollo is the role model for right conduct, and a role model to aspire to. Perhaps there are many reasons unstated why Rollo acts in this way.

Australian Creative Writing researchers in this field consider: Who is innocent? Who is really guilty? Do crimes end? Where does trauma and the criminal start? Australian Creative Writing researchers implicate economic selfish wars and cognitive and actual prisoners' dilemmas, and legal processes and law enforcement as causes of significant suffering. The themes in this section will be reflected in the researcher's novella.

Conclusion: Australian crime fiction of justice and injustice tackles serious legal issues fearlessly and considers legal processes that warrant further examination. The researcher will write towards improving justice and minimising injustice through an original novella and PD model.

<u>*Section 5*</u>:   Research Gap Information – Creative Writing and Binaries Inadequacy

Introduction: In this section, the research scope of literature shall be consideration of structural binaries in society, the broader topic, and a future of eliminating them in creative writing, the narrower topic. The gaps in this research shall justify this researcher's research and comprises a contribution in this research space. The knowledge generated in this section will be examined in the original novella and PD model.

Methods: The methodologies and methods that the researcher uses in this section to identify and analyse appropriate research, are from: Textual Analysis, Critical Theory, Trauma Theory and Gender Theory.

Research/Analysis: While nature is complex, humans have sought to limit it to binary concepts, in what the researcher finds is a form of social control. Binaries are evident in creative writing but the extent of this is rarely known. Ferdinand de Saussure's Saussurean binary opposition ("SBO") philosophy stipulates that the meaning of a word is learned when contrasted with its opposite complement (e.g. "dark" by reference to "light") (Putri & Sarwoto 2016; Claude Levi-Strauss; Klages 2006). Yet in the nature there are more than dark and light, such as: sunrise, sunset, noon, pre-noon and post-noon, in the early mornings, midmorning and late morning, in the early, mid, and late afternoons, and nights with twilight, early evenings, late evenings, deep midnight, and so forth, and even moon light and star lights, and horizon of colours and densities. There are layers upon layers of complexity in nature. Binaries, therefore, limit thinking and reduce choices.

Putri and Sarwoto (2016) find SBO existing in creative writing themes and consider it a creative writing technique. Jacques Derrida observed that SBOs are embedded with hierarchical preferences (Alcoff 1988, p. 415). Binaries (e.g. such as "us and them") unnaturally and through violence diminish others (see: Hanel, Maio & Manstead 2019) and motivate unprovoked aggression (e.g. can cause death: Royal 2019), and even genocide (Moshman 2007) and acculturates binary aggression. Furthermore, binaries artificially constrict learning (Mills 2005) and thinking and therefore unnecessarily restrict research.

The PD models fail to reflect real life because of their binary narratives and structures (e.g. binary persons, choices, crimes, outcomes) and other binary assumptions (e.g. guilt is assumed, there are no legal safeguards). There are two binary groups involved both highly selfish. Thus the world is cast in the binary selfish and is greatly diminished: law enforcement through the desire to elicit a confession and disregarding safeguards; and interrogatees through a desire to avoid prison at all costs, disregard their alleged accomplices. All selfish traits at the cost of justice and significant harms, as informed by the following research.

The researcher therefore proposes anti-SBO ("ASBO") writing as an alternative creative writing process, for complexising images and social constructs, for deconstructing binaries themselves. The researcher envisages creative writers' ASBO roles may include classifying new states of nature and shattering the delimiting past and present. Creative writers should be aware of complex acculturations occurring in their own writing, otherwise risk perpetuating binary and social harms. But ASBO thinking and writing like cultural change itself and creative writing may take time to develop.

The researcher will explore the use of non-binary pronouns in the embedded novella for eliminating binaries in the novella's world. A number of Australian writers' works use non-binary pronouns:

> On one side of the debate are lesbian, gay, bisexual, transgender, questioning, intersex, asexual (LGBTQIA) advocates and allies who view traditional pronoun use as limiting, discriminatory and symptomatic of a deeper problem in society … The hate crimes committed against transgender and non-binary people are largely motivated by an ideological worldview that is systematically reinforced through the daily, widespread use of normative gender pronouns.
>
> <div align="right">(Norris & Welch 2020, p.2).</div>

While use of "she", "he" and "it" are highly problematic (Norris & Welch 2020), "their, them, they, theirs, themselves, themselves" are widely preferred by non-binary people, but are not the only pronouns preferred (Thompson 2019; Norris & Welch 2020; Lee 2022). Furthermore, gender fluid people may switch between gender identities. This Creative Writing researcher will combine "she", "he" and "it", and other personal pronouns to provide a sense of gender fluidity; noting however that "their, them, they, theirs, themselves, themselves" may be preferred in society. Australian non-binary writers are producing outstanding innovative works: Ellen van Neervan's *Heat and Light* (van Neervan 2014); Christos Tsiolkas's *Barracuda* (Tsiolkas 2015); Alison Evans's *IDA* (Evans 2017).

Conclusion: Binary thinking and models are destructive and are a form of control. The researcher will write towards non-binary gender fluid writing and ASBO writing in the novella, which may represent a new cultural product. The researcher will deconstruct existing binary structures in the world by deliberately complexing them. The researcher's goal will

be to examine and deconstruct binaries in the society and binary models. These are the research gaps being filled by the researcher in this project.

Phase 3

Section 6:   Research Gap Information – Economics Shortage

Introduction: In this section, the research scope of literature shall be relevant economics and economic theory pertinent to understanding the PD models, as they apply contextually and holistically, broadly, and their relevance to economic morality, narrowly. The research gaps in this section are filled by linking existing research to the PD models and original research and comprises a contribution in this research space. The knowledge generated will be examined in the original novella and PD model.

Methods: The methodologies and methods that the researcher uses in this section to identify and analyse appropriate research, are from: Textual Analysis and Critical Theory.

Research/Analysis: The PD models are represented symbolically, mathematically and narratively as follows:

Figure 2.3: The PD Model Symbol: Payoff Matrix

	Person B	
	Silent	Confess
Silent	-1, -1	-3, 0
Confess	0, -3	-2, -2

Person A

Figure 2.4: The IPD Model Symbol: Payoff Matrix

	Person B	
	Silent	Confess
Silent	3, 3	0, 5
Confess	5, 0	1, 1

Person A

The PD model payoff matrix: The PD model contains fixed pay-offs, motivations and presumptions of rationality, which cement that an accomplice will always confess to a crime when separated in an interrogation, if presented with prison-sentence discount-incentives. It is not rational under the Nash equilibrium strictly dominant strategy, in a one-off game, for alleged accomplices to deviate from the possibility of a zero prison sentence offer, when information coordination is impossible. Interrogatees also factor the additional threat and pressure of receiving a three year prison term if their alleged accomplice confesses and they do not.

There are two crimes involved. The payoffs for *Crime 1* include no prison-sentence for the first accomplice if that accomplice confesses (0 years) and the second does not confess (receiving a 3 year term), under the prosecution deal. If the first accomplice does not confess and the other does, then the imprisonment payoffs are reversed. This carrot-and-stick approach artificially results in both alleged offenders confessing to the crime based on fixed motivating incentives. Since both confess, they receive an intermediate prison-sentence (2 year terms). Hence, both are greatly penalised for confessing to Crime 1, by comparison if both had remained silent only Crime 2 would have applied. *Crime 2* is a far less serious crime, in which the existing evidence alone will result in a conviction for both accomplices regardless, with them receiving a shorter prison-sentence (1 year each). Both crimes apply in the PD model.

Randal Picker (1994) comments on this result as follows:

> The outcome—both prisoners confess—seems counter intuitive at first because the prisoners would have been better off if both had remained silent. But this result follows once we assume that we have structured the payoffs correctly. Even if each prisoner erroneously believed that the other was altruistic and would confess, we would still have the same outcome, given our assumption that the prisoners care only for themselves. … The result is not at all odd once one recognizes that the prisoners lack a means of committing themselves to remaining silent.
>
> (Picker 1994, p. 5)

The PD models' "game" appears horribly cunning by inviting both prisoners to effectively set their own prison terms and is a serious "game" akin to high-stakes "gambling". Regardless of innocence, the game is always rationally played. The PD model ignores relationship factors, altruism or spite and reputational issues (Picker 1994, p. 4) and only works because the

payoffs and the Nash equilibrium are fixed – unilaterally predetermining "rational" behaviour.

The IPD model payoff matrix: game above is representative of an indefinite number of PD games, with rewards shared and the eventual result of at least one game resulting in cooperation (payoff rewards of 3). Information on past strategic plays in two player IPD games may be known. Strategies can be modelled under various games to show varied game outcomes.

Logically, some level of exchange of information would have occurred in real life between alleged accomplices if they had contemplated criminal activity. Potential distrust of law enforcement would also be a problematic factor (Del Toro et al. 2019). The PD model is based on "fixed" assumptions that highly limit the rationality of the human subjects and contains narrative fictions (Contessa 2010; Morgan 2001a; Morgan 2001b). The Nash equilibriums in the PD model and IPD model are misleading and will be shown not to reflect the range of real-life decision-making in high-stakes prison interrogations.

Implied theory in the PD models: Adam Smith considered that economic activity required legal protection, and impliedly legal enforcement and sanctions against criminals, to create an environment of security especially for an "owner of valuable property … [to] sleep a single night in security" (Adam Smith 1776, p. 550). Accountability for crimes is a necessary precursor for "the secure environment" for presumably economic exploitation/economic activities to occur. David Hume considers justice is necessary because people are "selfish": "['T]is only from selfishness and the confin'd generosity of men ... that justice derives its origin" (Hume 1739, p. 548). The idea of "selfishness" and of "a seemingly generous process

of justice" are embedded in the PD models. But digging deeper, law enforcement are selfishly seeking a conviction and higher prison penalties for interrogatees, and prisoners are isolated into high-stakes environments to "make" a confession. Corporate selfishness and possible gains for buyers are a significant feature of microeconomics, which in itself like justice under the PD models, contains embedded concepts of rational decision-making and irrational decisions and penalties. "Ethical codes" are official standardised behaviours that describe ethical and unethical (moral and immoral) conduct. Similarly, moral codes may evidence immoral conduct. Laws subvert both ethics and morality and may proscribe moral and immoral conduct or proscribe and be applied morally or immorally. What is right and what is wrong in ethics, morality and laws, and differences whether enshrined or by omission, may enable a class of persons to exploit others and morality and immorality or right and wrong become forms of suffering. Selfishness then is a major feature of Western democracies.

Adam Smith (Smith 1776) furthermore found economic efficiency to be fundamental to economic enterprise, but was not necessary for economic activity. Efficiency, as a binary, is embedded in the PD model's apparent minimisation of legal process costs (but found to be a cause of rising legal process costs in this thesis). The researcher's novella will examine the effects of "economic efficiency" across society.

Homoeconomics assumptions are implied in the PD models. Hommoeconomics decision-makers are not concerned with others (e.g. do not "consider" their accomplices, are not concerned with ethics or morality, and are effectively automatons), maximise utility (e.g. depending on the payoffs), are free from emotion (are selfish), and do not factor the future but rather immediate choices and assumes everyone behaves the same way (as a form of rationality) (Baddeley 2018, pp. 19 - 20). In the real world payoffs and consequences are not isolatable, are not fixed, and people do consider the future and are relationship-orientated. People can choose not to be selfish and collaborate. These arguments are strongly oppositional to homoeconomics assumptions.

The PD models then reflect behaviours that corporations want people to have. Homoeconomics is supported by egoism, a psychological theory that suggests all behaviours are motivated by self interest (Sullivan & Pecorino 2002). This theory has been challenged through altruism (Sullivan & Pecorino 2002; Stanford Encyclopedia of Philosophy 2019). It should not apply in all circumstances (Stanford Encyclopedia of Philosophy 2019). Elliot Sober and David Wilson conversely argue that evolutionary theory supports altruism (Sullivan & Pecorino 2002). Empirical evidence overturns Homoeconomics theory (Sullivan & Pecorino 2002).

Friedrich Hayek in his neoliberal seminal work *The Constitution of Liberty* (Hayek 1960) identifies economic "disciples" of faith in the economic system (Hayek 1960, p. 49) as having the promise of libertine freedom (Hayek 1960, p. 57). That is, the promise of "overwhelming release" from economic financial and physical burdens. Hayek links economics to religion and morality (Hayek 1960, pp. 52 – 53). No definition of religion has been agreed upon and those definitions in existence are arbitrary and contested (Harrison

2006). Clifford Geertz's criteria (Harrison 2006, p. 8; Geertz 1973, p. 90), however, as applied to the PD models, determine unequivocally that the PD models are symbols of "economic morality" and that economics is a "economic religion": e.g. (a symbol in) a system of symbols, cloaked in a unique aura of factuality, designed to affect moods and motivations in a powerful, pervasive and long-lasting way and implies a general order of existence. Economics meets this definition of religion (economists and academics also have proclaimed economics a religion: Stiglitz, 2013; Krugman, 2014; Nelson 2014; Rapley 2017; Hellestveit 2014). The PD and IPD models meet the definition of a religious "symbol" (see: Harrison 2006, p. 8; Geertz 1973, p. 90). Conceptually, libertine freedom also points to economics being a religion, because it offers "the promise of overwhelming relief" against world suffering, including economic-causative suffering.

Incarceration rates in Australia since the introduction of the PD model: from 1950 have significantly increased (refer to the following chart). This has been shown to be a result of Australia's tough-on-crime policies (Leigh 2020). The PD models motivate the same tough-on-crime position, through law enforcement's emphasis on obtaining a confession "at all costs".

Chart 1: Australia's Incarceration Rates (1938 – 2018)
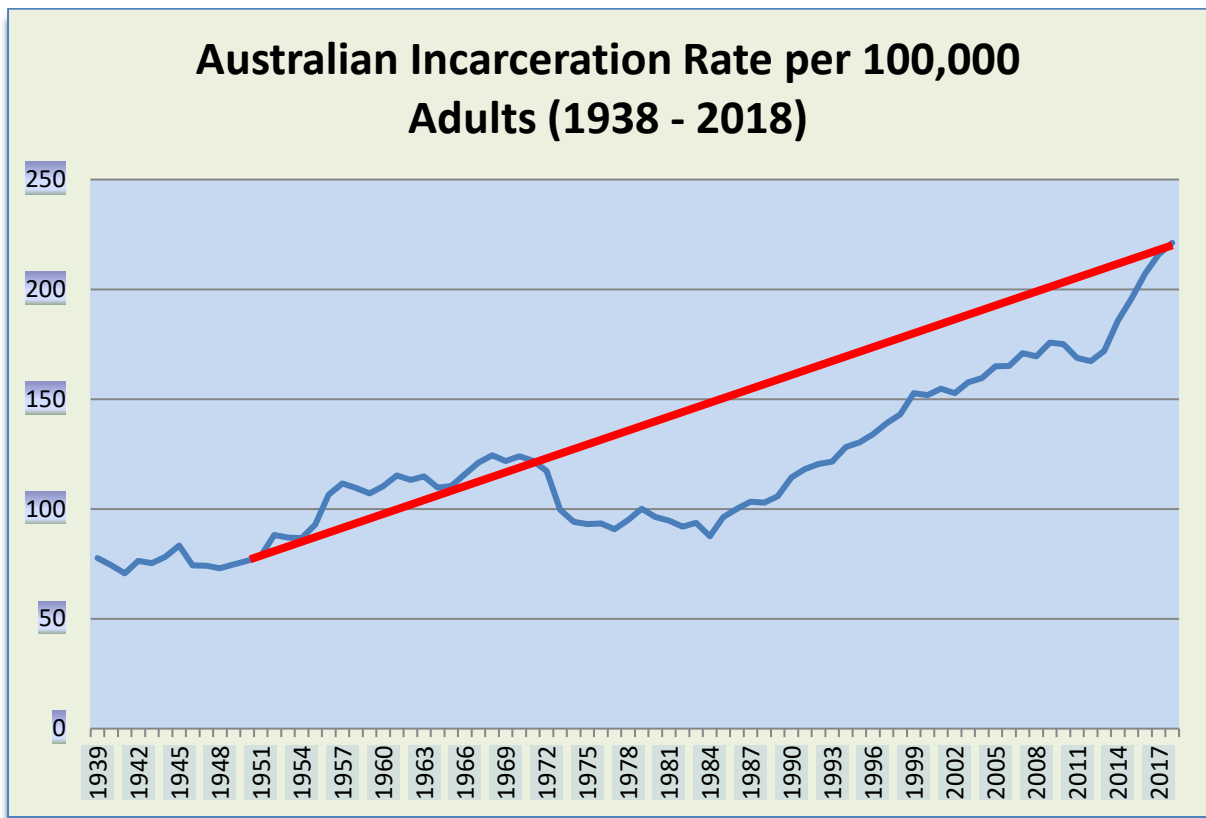
In 1938, 73 persons per 100,000 adults were incarcerated in Australia. By 2018, the rate had

increased to 221.2 adults per 100,000, a staggering three times the number of prisoners

compared with 1938 levels (and higher than Canadian and England and Wales prison rates,

but not the United States: Leigh 2020). The PD models are utterly implicated in this shift as

they strongly motivate a tough-on-crime attitude towards alleged "offenders" at the

interrogation stage and motivate lengthy prison terms.

Tough-on-crime policies negate circumstantial facts, and include: mandatory prison sentences

for first offences and significant prison terms for repeat offenders or for serious crimes (e.g.

for property offences) (Williams 1999, pp. 33 and 37). These tough-on-crime policies have

far-reaching effects across the justice system.

Furthermore, disadvantaged persons, those with poor workforce participation prospects are overly represented in prisons (Williams 1999, p. 39). Such persons arguably lack the skills, knowledge, culture, environment and history to escape imprisonment. Disadvantaged persons include an over representation of racial and ethnic minorities (Nellis 2016; Williams 1999, p. 39). This implies structural inequality of disadvantaged, impoverished and minority groups. The effect of generational disadvantage also affects generational imprisonment and the incarceration of a parent is a cause of disadvantage in itself which leads to offending (Roettger, Lockwood & Dennison 2019).

The cost of imprisonment is horrendous and alarming. Australia spent $4.6 billion on prisons (mostly on operations) and more than 17 billion on justice, a 29 percent increase in the five years to 30 June 2018 (Bushnell 2019). The PD models motivations are: (i) motivating higher incarceration rates and higher incarceration costs and are offending economic efficiency principles; and (ii) are theoretically and empirically ineffective with regards to criminal reform. Imprisonment is a great inefficiency and appears to have no or a positive effect on crime.

The South Australian government recently determined that prison-sentence-reducing-incentives of a range considered in the PD models were far too lenient, and were impliedly not having the desired effect in reducing crime. They were also against community standards and expectations for serious crimes (e.g. reductions for sexual crimes were grossly unpalatable). Major indictable sentence discounts fell in South Australia from 40% to 25% for many offences as a result: Premier of South Australia 2020a; Premier of South Australia 2020b; Legal Services Commission of South Australia 2021d; Cosenza 2020). Logically,

prison sentence discounts act as a "reward". It is unsurprising that crime has increased since the PD models' introduction and under the motivations factored into PD models' narratives; essentially creating IPD interactions. Reduced sentences also logically reduce reform intervention time although prison itself is crime enhancing.

Conclusion: The PD models are built with erroneous assumptions and appear to be motivating major serious crime. This section's research shows that the PD models' motivations are having a negative effect in increasing criminal costs and crime and that sentence discounts are shown to operate as rewards for criminal conduct. The researcher will develop an original PD model factoring in this research for this reason. These findings will be reflected in the original novella.

<u>*Section 7*</u>:   Research Gap Information – Law and Legal System Slippage

Introduction: In this section, the research scope of literature shall be the identification of criminal law theoretical norms relevant to the PD models, the broader topic, and the relationship and divergence of the PD models from legal theory, the narrower topic. The research gaps in this section are filled by linking existing research to the PD models and original research and comprises a contribution in this research space. The knowledge generated will be examined in the original novella and PD model.

Methods: The methodologies and methods that the researcher uses in this section to identify and analyse appropriate research, are from: Textual Analysis and Critical Theory.

Research/Analysis: *Game theory and the law*: University of Chicago researchers from the University of Chicago Law School note the scales of law and legal philosophy may align in game theory, especially when law is reimagined as solving a complex game (Picker 1994), where the prisoners are replaced with competing interests and competition that do not align. Randal Picker notes:

> The power of the Prisoner's Dilemma comes from the incongruence between private benefit and the collective good. Individually rational decisionmaking leads to collective disaster. The Prisoner's Dilemma is thus often seen as one of the main theoretical justifications for government intrusion into private decisionmaking … .

> (Picker 1994, p. 5)

Picker (1994) notes that legislation changes behaviour and investigates tort law with the use of the PD models and the rational behaviour concept. Findings are that the PD models and game theory can assist legislators with understanding how legislation will change behaviours. Much legislation minuate, however, does not necessarily fit into game theoretic models, as legislation itself is a cause for citizens to change their behaviours regardless. Game theory is rarely utilised for examining laws for this reason.

The PD models, however, examine only immediate behaviours and motivations and do not examine the impact on legal-criminal relationship factors: the impacts of interrogation on alleged offenders and the effect of imprisonment on curbing criminal conduct, and on social integration and employment. These will be shown to be glaring oversights in the PD models symbols and narratives and motivations.

Legal theory: contends that criminals must be held accountable for conduct that offends norms as defined in law (Brudner 2012, p. 55). Political authorities restrain individuals to restrain "criminal" reactions (Brudner 2012, p. 55), although this power is not absolute and is subject to legal safeguards, which are not factored into the PD models. Normative theory contends that political authorities may offer alleged offenders the opportunity to resolve criminal complaints efficiently "and fairly", and from authorities' perspectives with regards to appropriate penalties and punishments. Plea bargains are made with regards to reducing charges and potential jail time; sentence discounts can apply in relation to prompt confessions; the non-prosecution of certain offenses or no conviction being recorded, are also negotiated; the facts in relation to crimes may be negotiated, which can greatly impact on findings of guilt and result in reduced or withdrawn criminal charges. Prisons exist, under criminal legal theory, to: deter crime; punish offenders; bring retribution, a form of public

retaliation; enable offender reform and reform processes to be enacted; and "incapacitate" offenders from offending conduct (Maccormick 1950). The failure of the Australian and other legal systems to curb crime warrants attention.

The causes of crime are limited (BBC 2022), focusing on home violence and ignore work violence, which has similar consequences (refer to factors listed in the following: Australian Human Rights Commission 2011; NSW Government 2016; Safe Work Australia 2022). Prisons are examples of economic violence: violent and extreme workplaces; and the PD models are examples of economic violence. Home violence can be more severe than work violence: both can result in death. Social problems caused by economic violence are ignored but must be addressed.

Individualist and collectivist theories of crime are relevant for assessing the PD models:

> Individualists tend to focus on personal weakness as the reason a crime is committed. If someone chooses to offend, that is their responsibility and if caught, they should suffer the consequences.

> Collectivists feel that society is unequal and some people are at greater risk of being influenced by criminal behaviour, often through the actions of parents or friends.

> To tackle crime, collectivists feel that social conditions which create the catalyst for crime need to be addressed. This could be through better housing, improved employment opportunities and a more equal society to make crime less of an attraction. If people are in work and are content with life they will be less likely to break the law.

Most recent governments at a UK and Scottish level see merit in both the individualist and collectivist beliefs and accept that there are underlying causes of crime. But individuals also need to accept responsibility for their actions. It is the government's job to tackle crime, both its causes and the offenders.

(BBC 2022)

In the researcher's opinion, individualists are blind to collectivists' rational arguments on the causes of crime. Individualist thinking is binary and harmful and does little to reduce crime. Crime is more than a cost to the economic system. The value of human lives in all classes, races, genders, creeds and environments is at stake. The researcher will examine the issue of economic violence in the original novella through the perspective of workplaces of violence, and will produce an original PD model for the purpose of reducing and eliminating crime from society, including, crime in all its forms as "harms against persons".

Law enforcement derived confessions: Confessors suffer serious retribution harm and reputational damage in confessing (Sweeney 2020; Nedim 2015; Stillman 2018). This is not factored into the PD models. Witness protection should be a consideration but is cost prohibitive and rare (Australian Federal Police 2020). Offenders focus more on the strength or weakness of evidence when making confessional disclosures rather than incentives (Deslauriers-Varin, Lussier & St-Yves 2011). The PD as a symbol motivating early confessions is discriminatorily harming young offenders. Studies show that confessional motivations target younger persons (Kassin et al. 2010; Drizin & Leo 2004; Stillman 2018). A staggering 20% of wrongful convictions are due to false confessions obtained during police interrogations (Kassin et al. 2010; Garrett 2008; Drizin & Leo 2004; Yeshiva University 2021): 63% of false confessions in interrogations are obtained from persons under 25 years of age and 32% under 18 years of age; 30% of these involve multiple false confessions for the

same crime. The PD models' motivations, in real life, are targeting younger offenders and directly result in them being seriously harmed.

Confessional reliability: Police informants, like PD confessors, are incentivised to lie for prison term reductions, their testimony is unreliable and results in false convictions (Wetmore et al. 2020). Furthermore, younger persons are predominately indicated in "forced" confessions and many years later may be exonerated through DNA evidence and are heavily indicated in fatal retributions from making confessions (Kassin et al. 2010). Confessions can be made due to an interrogatee's experience of law as a fait accompli.

Legal safeguards: are not included in the binary PD models (e.g. presumption of innocence, the right to remain silent, to have a lawyer present: Legal Services Commission of South Australia 2021b; Legal Services Commission of South Australia 2021c; Legal Services Commission of South Australia 2021e; Kassin et al. 2010). These affect interrogation outcomes. Not including them in the PD models motivates law enforcement to disregard legal safeguards in real life, and potentially focus on confessions at all costs (which has already been shown to motivate younger persons' false confessions). Miranda rights were not existent when the PD model was developed in 1950 and the relevant case *Miranda v. Arizona* (384 U.S. 436 (1966)) was decided in 1966 that warns arrested persons of their legal rights to remain silent and be represented by an attorney, and implies the PD models do not reflect modern interrogation procedures or processes.

Conclusion: This section research fills a gap in the literature linking PD models' motivations to younger persons confessing and making false confessions and facing fatal retributions; a serious lack of legal safeguards and an extreme view of criminal. The PD models fail to

adequately reflect legal safeguards and motivates law enforcement to subvert them; and obtaining confessions at all costs. The PD models should possibly be withdrawn.

<u>*Section 8*</u>:   Research Gap Information – Crime and Psychology Shortfall

Introduction: In this section, the research scope of literature shall be imprisonment psychology and trauma, broadly, and as it applies to the PD models, narrowly. The research gaps in this section are filled by linking existing research to the PD models and original research and comprises a contribution in this research space. The knowledge generated will be examined in the original novella and PD model.

Methods: The methodologies and methods that the researcher uses in this section to identify and analyse appropriate research, are from: Textual Analysis, Critical Theory and Trauma Theory.

Research/Analysis: Baddeley argues that justice has implied economic, psychological and moral benefits (Baddeley 2018, p. 2). Game theory and psychology have produced a staggering body of literature but with no significant result:

> Despite this impressive stock of knowledge, our understanding of the determinants of [non-] cooperative behavior remains limited. An important reason is that the economic approach tends to start from the untenable assumption of the homo anonymous.
>
> (Boone, de Brabander & van Witteloostuijn 1996, p. 2)

As Boone, De Brabander and van Witteloostuijn (1996) noted the psychology literature is large in this cross disciplinary segment and the researcher will not examine this body of knowledge except to say that the field is similar today as in 1996, as Baddeley points out.

*Imprisonment non-deterrence factor*s: Prisons "acculturate" inmates. Prisons provide stability (accommodation and sleep routine), food (regular nutritious meals), are not a suitable form of deterrence (van Ginneken 2016 pp. 10 - 11), and create new culture groups (group identification and loyalty), offer protections (only from external enemies) (Caldwell 1956), and provide drugs (illegal and legal) (Kolind & Duke 2016; Hickey 2021). Hence, on one level prisons reward criminal conduct. Prisoners receive substantial psychiatric medications and prisons are where psychiatrists "overprescribe" antidepressants (Hassan et al. 2016; Australian Institute of Health and Welfare 2016), which are a known cause of increased aggression and violent crimes (Molero et al. 2015).

Imprisonment as a deterrent: Imprisonment is retributive and retaliatory and "trauma enhancing". Prisons are ironic brutal places of extreme trauma and torture where a "gloves off" approach and the absence of law and order ironically exists (in opposition to prisoner rehabilitation); where inhumane demands for obedience and discipline occur through "cruel or domineering co-prisoners" and are enforced with violence (e.g. physical and sexual assault, and rape) (Thomas 2019; Haney 2017; eds Enggist et al. 2014).

Prisons are a training ground for more violent crime (Shammas 2017). Prisoners leave prisons more violent and reactive and traumatised through the prison system "education" (Goff et al. 2007) and less able to participate in economic work and likewise the economy (Visher, Debus-Sherrill & Yahner 2011). Crime is acculturated. But reform is less possible arguably because of economic participation damage.

The economic workforce participation factors: represent obscene losses of earning potential when compared to pre-prison employment (Visher, Debus-Sherrill & Yahner 2011). A study by Visher, Debus and Yahner (2011) found prisoners obtaining and keeping employment post prison was very difficult, income was low when received and arrests were on the rise (Visher, Debus-Sherrill & Yahner 2011). Prisons offend economic participation, offend economic principles and offends natural rights to health. This is a great loss of the economic promise of wealth and future opportunity; causes a massive workforce participation loss. Prisons are therefore horrendously cognitively, central nervous system and physically compromising and disabling. It is a disgrace to human beings around the world that this occurs, that prison's exist and that persons, or even animals, are imprisoned. Other means of rehabilitation must be found and invested in and investment must occur to dismantle and transform all places of violence.

Socio-economic imprisonment factors: have been widely researched, such as unemployment (Braithwaite, Chapman & Kapuscinski 1992), homelessness (Payne, Macgregor & McDonald 2015) and domestic violence and other violent environments (Lutya 2012) are significant causes of crime and criminal records. These require urgent interventions and shall be factored therefore into the original PD model. The researcher shall incorporate these views as a string of "overbearing influences" ("OIs") that do lead a person from or to prison or away from prison and offending. Clearly, those in violent environments do not have the knowledge or skills or capacity to ameliorate OIs. The focus of the researcher's original PD model will be on reducing and eliminating crime through the proper management of OIs.

The PD models' confessional entrapment: suggests a negative public impression of law enforcement, and negative public impressions alone are constant source of police stress

(Woody 2006). Interrogations cause anticipatory and confrontational stressors with regards to all parties involved (Violanti et al. 2006; Putnam 2013; Woody 2006; are a cause of PTSD for all parties: Violanti et al. 2006; Putnam 2013). With regards to interrogatees, interrogations increase conflict, occur in non-supportive often windowless or window reduced rooms, and enhances the normal incentive for escape (Kassin 2014, p. 113: the stressful fight, flight or freeze response takes hold); involve accusations, interruptions and objections using real and false evidence (Kassin 2014); and the psychological maximisation and minimisation of crimes technique (Kassin 2014, p. 114). Studies also prove that legal system actors face insurmountable barriers in trying to tell if someone is lying or telling the truth (suggesting that credibility is unknowable; Kassin 2014). Innocent suspects struggle with interrogation trauma, too. The PD models increases trauma and logically negatively affects economic productivity for both police and those interrogated. The PD models contain isolation narratives and the maximisation and minimisation of crimes in the form of payoffs (0 and -3 or 5, depending on the "game" played). Interrogations are a form of torture, a "hell" (Kassin 2014). As Frank Putnam notes:

> Interrogation techniques are designed to create a destabilizing sense of shock; undermine an individual's grasp on reality; and provoke internal psychological division, self-conflict, and confusion. The long-term effects of interrogation often include posttraumatic stress disorder as well as states of anxiety, depression, and depersonalization.
>
> (Putnam 2013)

Interrogations destabilise persons' cognition and nervous system, are a form of public bullying and with extreme high stakes pressure, with traumatised individuals leaving highly traumatised.

Conclusion: The PD model's focus on imprisonment and maximisation and minimisation psychological interrogation techniques (in the form of payoffs: 0 and -3 or 5, depending on the "game" played) and its motivations are a source of PTSD in legal processes. The destruction of workforce participation, the traumatising and devastating of individuals is creating crime. Prisons are a means of providing stability on a number of fronts and operate as rewards. Prison destroys lives and increases crime. The PD models are economically immoral and are examples of economic violence. This knowledge gap is filled by the researcher in this section through liking existing but otherwise separate research to the motivations behind the PD models and through the provision of original research. An original PD model will be constructed with a collectivist OI approach towards eliminating and reducing crime.

Introduction: In this section, the research scope of literature shall be empirical human studies closely connected with assessing game theory, in broad terms, and specifically the PD models, in more narrow terms. The research gaps in this section are filled by linking existing research to the PD models and original research and comprises a contribution in this research space. The knowledge generated will be examined in the original novella and PD model.

Methods: The methodologies and methods that the researcher uses in this section to identify and analyse appropriate research, are from: Textual Analysis, Critical Theory, Trauma Theory and Gender Theory.

Research/Analysis: Beyond computational and artificial experiments concerning game theory's PD models, prisoner empirical studies and in the field experiments enable further light to be shed on the PD models.

Prisoners' empirical study: A study by Deslauriers-Varin, Lussier and St-Yves (2011) examined real life interrogation outcomes. The study involved 254 prisoners from a maximum security prison in Quebec. This study utilised prisoner surveys and correctional files and drew on a number of other similar studies in the field to design the study and assess and compare the findings. The results were: the number of multiple prior convictions resulted in less confessions generally; strong police evidence was one of the strongest predictors for a confession, indeed pivotal; weak police evidence resulted in less confessions, but those who

did confess included "first offenders" arguably vulnerable; legal advice decreased the likelihood of a confession by a whopping 83%; offenders who felt guilt were more likely to have confessed to a crime; being single and non-Caucasian increased the likelihood of confession; views of crime seriousness was a predictive factor for a confession (Deslauriers-Varin, Lussier & St-Yves 2011).

First, younger offenders were not included in this study. Second, false confessions were not considered. Third, this study did not include cases that did not go to Court of which may be a high number. Fourth plea bargaining and sentence discounts were not considered.

An important observation worth noting is that confessions occurred predominantly when the person concerned did not have a lawyer present and occurred least often with legal representation. A study by Leo (1995) highlighted interrogation techniques: the researcher notes that when assessing the study that interrogations can be used to:

- Manipulate views on strength of evidence (confirmed in this study)
- Manipulate views on the facts of the evidence, memories and expressions of conduct
- Result in more serious charges being laid
- Result in convictions for the same

Convicted offenders still struggled with obsessing and reconciling their views on the strength of police evidence and guilt, suggesting low self worth and confounding dilemmas conflicting with their need to correct themselves and their behaviours. Offenders still appeared to struggle with interrogation trauma, obsession and compulsion guilt. Prison is

traumatic in itself and would be significantly heightening offenders trauma and cause a worsening of trauma.

Against the PD models' predictions generally, significant levels of cooperation have been found in experimental studies (Flood 1952; Cooper et al. 1996; Clark & Sefton 2001). A study by Khadjavi and Lange (2013) was the first PD models experimental study on actual prisoners. This study also involved a separate cohort of students. The study showed that prisoner's collaborated far more often in real life than the PD models predict (Khadjavi & Lange 2013). In this part laboratory and part field experiment both groups undertook a simultaneous and a sequential IPD model experimental game, with motivational rewards. In the simultaneous game, 37% of individual students chose to cooperate as opposed to 56% of prison inmates. In another finding, 13% of student pairs cooperated, whereas 30% of prison inmates cooperated. In the sequential game, both 60% of students and prisoners cooperated after a cooperative first mover. Defection was answered with defection, showing that cooperation was conditional. This study is disarming for game theory, but it was nonetheless an experiment and involved limited rewards, reasonable stakes nonetheless, which may have had some effect on the results. No high-stakes interrogation study occurred. Otherwise this study seems highly reliable. The findings support earlier studies that show the PD models are highly inaccurate with regards to the extent of prisoner cooperation and defection. Cooperation among prisoners proved extremely high in this study.

Conclusion: This section fills a research gap by formally linking two important studies to the PD models, and finding they conflict with the PD models' assumptions and completely undermine them, and making original research findings that further undermines the PD models. Under the first study (Deslauriers-Varin, Lussier & St-Yves 2011), prisoners'

confessions tended to hinge on views of the strength of evidence and the absence of legal counsel. There is a significant issue that views of the strength of the evidence, and presumably the crime alleged, was affected by interrogations in the absence of legal counsel. This is a major flaw also in the PD models, that legal safeguards are not factored. This study also lends weight to the researcher's finding that the PD models' incentives are operating as rewards. Furthermore, the earlier findings in the Creative Writing research sections and numerous other sections of this thesis, that legal processes behind public scrutiny are horrendous are implicated in this research. It is beholden to authorities that all people receive legal counsel before making police statements and earlier statements should not be accepted into evidence or otherwise may suggest inappropriate influence. The second study (Khadjavi & Lange 2013) shows that prisoner's cooperate far more than the PD models predict. These studies support earlier findings by the researcher regarding the incorrect assumptions built into the PD models for cooperation and defection. The researcher confirms that an original PD model should be developed and be reflected in an original novella, also focusing on "interrogation as a cause of crime", the final research gap.

Conclusion

The researcher confirmed this transdisciplinary study, applying divergent knowledges, was urgently needed and identifies and fills a number of research gaps in multiple disciplinary research spaces. This was necessary and due to the multiple disciplinary concepts identified in the PD models. The researcher has linked a necessary web of information to the PD models and analysed them. The major findings are that the PD models are outdated, do not adequately reflect economic morality and are motivating terrible societal harms. The PD models lack legal safeguards; links to younger offenders confessing and making false confessions, and suffering fatal retributions; and prisoners are manipulated in interrogations to the point of suffering trauma, which are enhanced in prisons. This logically has resulted in increases in crime and workforce participation losses. The PD models are not appropriate.

Creative Writing researchers have noted the traumatic effects of interrogations and prisons for some time which are built into the PD models, but no researcher has presented a new model of the legal system; addressing the same could be a continual goal of Creative Writing researchers in the field. The researcher will develop an original novella, PD model and thesis. All research products will be symbiotically interwoven and the researcher will write towards a non-binary world and positive economic morality. This transdisciplinary literature review involved the application of methodologies and methods that enabled the researcher to formulate the research questions and conduct preliminary research.

Table 2.4: Transdisciplinary Literature Review Key Research Findings

Section	Transdisciplinary Literature Review Key Findings
Section 1	Game theory has been used to automate machines. Various schools of thought have different opinions on the usefulness of game theory, however there is a strong debate on whether game theory is useful at all. It is a serious issue the PD models may influence legal processes and decision-making and therefore urgent research is required to determine to what extent this is occurring. At present, no holistic transdisciplinary study has been conducted to examine relevance, effect and real-life motivations of the PD models. This research gap will be filled by the researcher.
Section 2	Science fiction is an appropriate genre and themes identified from this genre will be incorporated into an original novella. Science fiction writing addresses economics, normative models, religious questions and god. The researcher may combine these themes but address them through the lenses of deconstructing the PD models, an original PD model, binary mythologies and economic morality.
Section 3	International Creative Writing researchers have rejected the PD models' assumptions, finding they do not solve crime at all, but lead to trauma and increased criminal activity. Game theory and the PD models' logic are the focus of storied fiction, primarily from the education, plot and character strategies' perspectives. Rajaniemi (2011) finds that pain and "death-living-dying" is constant in the IPD world. Powers (2002) expertly shows their damage is everywhere. The researcher shall examine the impact of the PD models' "selfish binary" harms and shall negate them in the original PD model. This is another research gap the researcher shall address.
Section 4	Australian Creative Writing researchers find the application of law to be brutal and damaging, and question its methods and processes. Australian crime fiction of justice and injustice marries with the PD models' concepts of alleged criminals being outwitted by laws and legal processes: involving memory, murder, claims of innocence, harsh physical and cognitive prisons. Creative Writing research highlights the massive escalating negative personal costs of imprisonment. Creative Writing researchers highlight that urgent changes are needed but do not present a new legal system model. Conduct that grossly worsens relationships leading persons towards crime and prison is unregulated under capitalism. Significant social interventions are required but are not provided under capitalism. The researcher will write towards from the PD models and towards an original PD model with a focus on eliminating crime. This is the gap the researcher shall address.
Section 5	The researcher finds that binary harms are embedded in concepts. Creative Writing researchers should be mindful of them. Binaries are shown to be harmful and do not reflect the complexities of the world. Binaries are a form of social control. Binaries (e.g. such as "us and them") unnaturally and through violence diminish others. Anti-Saussurean binary opposition writing, as an alternative creative writing consideration for eliminating binaries, is raised by the researcher. There are two binary selfish groups in the PD models: law enforcement, in playing a high-stakes game to obtain a confession without legal safeguards; and the interrogatees who are entered into the high-stakes game involuntarily and are subjected to psychological trauma through crime maximisation and minimisation techniques. The researcher shall consider a world without binaries and will explore non-binary gender-fluid writing, and will write towards a non-binary world.

Section 6	The researcher finds the PD models do not reflect the real world and investigates their purpose. The researcher finds they are rewarding crime and offend economic principles, and some of which purportedly supporting the PD models appear highly artificial. A massive rise in Australian incarceration has been shown to be a result of Australia's tough-on-crime policies (Leigh 2020) of which the PD models highly motivate through law enforcement's emphasis on obtaining a confession "at all costs". The cost of imprisonment is horrendous and alarming. The South Australian government recently determined that prison-sentence-reducing incentives of a range considered in the PD models were far too lenient, appeared to be rewarding criminal conduct. Economics is confirmed a religion and the PD models confirmed as symbols of economic morality; only they fail grossly to reflect "positive economic morality". Nevertheless, the researcher shall produce an original novella and PD model that reflects positive economic morality and the findings of this project.
Section 7	The PD models inaccurately reflect the South Australian legal environment and presumably other Western legal environments. Normative legal theory confirms legal safeguards are necessary but the researcher finds them ignored in the PD models, which are shown to contain retributive and workplace economic violence. Prisons exist, under criminal legal theory, to: deter crime; punish offenders; bring retribution, a form of public retaliation; enable offender reform and reform processes to be enacted; and "incapacitate" offenders from offending conduct (Maccormick 1950). The causes of crime are limited (BBC 2022) focusing on home violence and ignore work violence, which has similar consequences and has not been researched. The PD models are linked to false confessions and fatal retributions in young offenders. Vital legal safeguards are absent from the PD models. Police informants, like PD confessors, have incentives to lie for prison term reductions. The PD models offer highly questionable analytical assistance and given their serious failings are motivating binary harms and should be removed or at worse reframed and renamed. Collectivist views of crime should assist with reducing or eliminating crime and their concerns will be factored into the PD model. The researcher will examine the issue of economic violence in the original novella, from the perspective of economic workplaces of violence, and will produce an original PD model for the purpose of reducing and eliminating crime from society, including crime in all its forms as "harms against persons": another gap the researcher expects to fill.
Section 8	Imprisonment is shown to be non-deterrent while being a place of violence, trauma and the absence of law; an educational and training facility for violence and a major cause of increasing crime. Imprisonment workforce participation loss due to imprisonment traumas are horrendous and therefore prisons as a place of reform and their viability in the current technological age requires urgent re-examination. Socio-economic factors are shown to be the true causes of crime, embodied in the "criminal" and shall be represented in the original PD model as OIs or overbearing influences, a collectivist approach. This also implies economic alienation and economic violence are causes of crime. Interrogations cause Post-traumatic Stress Disorder. The researcher will write from a world of interrogations and prisons in various forms towards a world without interrogations and prisons. On one level prisons reward criminal conduct. On another level imprisonment is retributive and retaliatory and "trauma enhancing". Prisons are ironic, brutal places of extreme trauma and torture, where a "gloves off" approach and the absence of law and order ironically exists. Interrogations destabilise persons cognition and nervous systems, are a form of public bullying and with extreme high stakes pressure leaving individuals traumatised. An original PD model will be constructed with a collectivist OIs approach towards reducing and eliminating crime, exploring a world without interrogation and imprisonment altogether and effectively turning the tables around on crime and negating the prison model; another gap being filled by this research.

Section 9	No legal representation results in interrogatees being "tricked" into confessing and presumably serving longer sentences. Furthermore, the strength of evidence and the understanding of facts may be easily manipulated in interrogations. It is assumed, without legal representation, more serious charges are laid and "offenders" serve greater prison sentences. Interrogation trauma appears to remain in unrepresented interrogatees. The number of "innocent" interrogates is unknown. Legal processes behind public scrutiny are questionable. Views on the strength of evidence are the pivotal factor in confessing. Questions are raised with regards to law enforcement maximising the interrogatees views on the strength of evidence. Regardless, this adds weight to sentence discounts operating as rewards in the reprehensible prison system. Offenders still appeared to struggle with interrogation trauma, obsession and compulsion guilt well after imprisonment. Studies show that prisoner's collaborated far more often in real life than the PD models predict This research confirms that an original PD model should be developed and be reflected in an original novella, also focusing on "interrogation as a cause of crime". This is the final research gap.

Chapter 3

Methodologies and Methods Literature Review

Introduction

The PD models apply multidisciplinary knowledges. Multiple disciplinary methodologies and methods, therefore, are required to unpack the PD models and for developing an original novella, PD model and thesis. Wilson (2019) emphasises that selecting appropriate methodologies and methods are critical since they affect "the conclusions that can be drawn". Methods must be rigorous to enable the researcher to address central research questions.

The researchers methodologies and methods enable the researcher to thoroughly investigate the PD models' application of multiple disciplinary knowledges (e.g. economics and mathematics, creative writing, philosophy and gender studies, law and legal processes, psychology, empirical studies and field experiments) and to deconstruct them. The following methodologies and methods selected by the researcher enable the researcher to achieve the research goals. Respective strengths and weaknesses of the methodologies and methods are identified, as well as how the researcher will apply them. The types of knowledge expected to be generated are detailed. Solo transdisciplinary researchers apply multiple methodologies and methods in ways that may transcend their disciplinary applications (Palmer 2011). Palmer (2011) identifies an "additive approach" involving the researcher examining "[theoretical] works within several disciplines and then strategically introduces new material from the field in areas which appear to be unaddressed or outside the boundaries of these

works" (Palmer 2011, p. 42). Thus, this researcher uses the additive approach and in applying Research-based Practice to "fuse" divergent knowledges but also the methodologies and methods as originally intended when appropriate. The next section contains a review of the methodologies and methods.

Figures 3.1 & 3.2 below pictorially describes the relationship between the methodologies and methods and research outputs expected from this project. This highlights the necessary "machinery" in this research and the intended effects of applying the methodologies and methods across this transdisciplinary project.

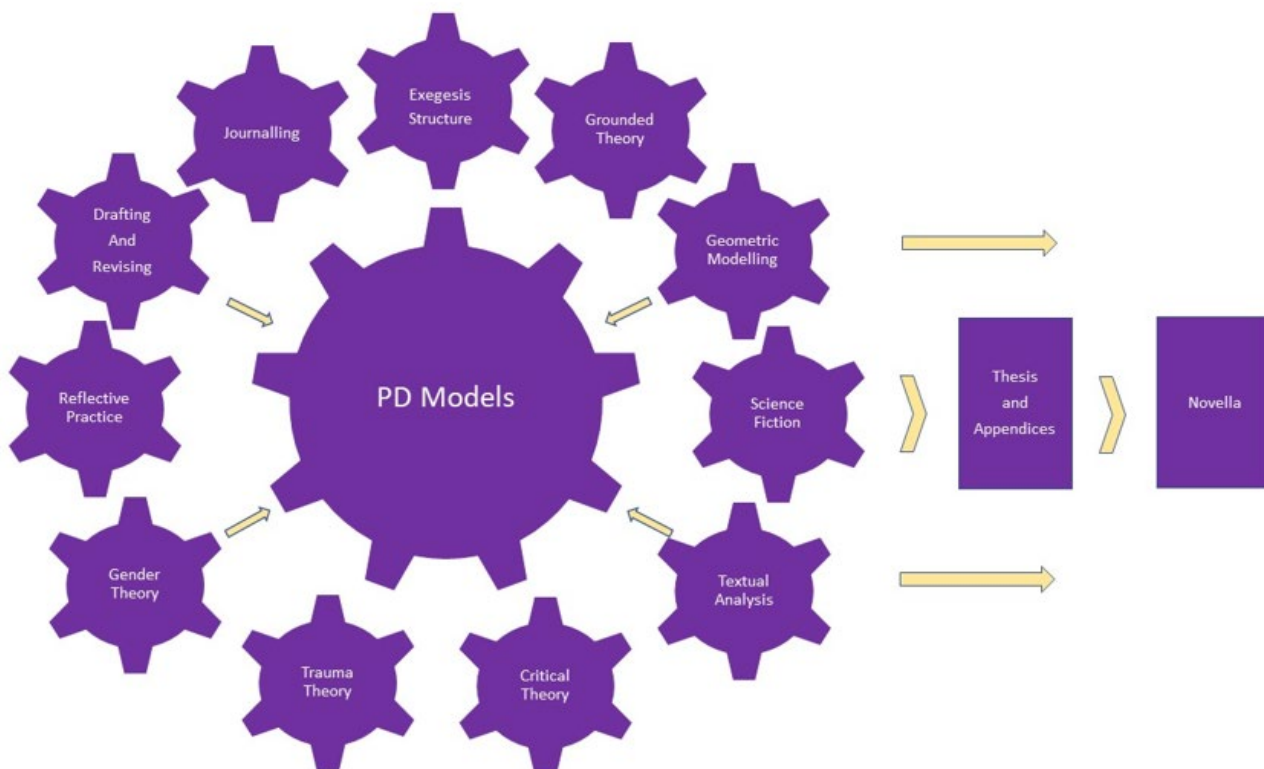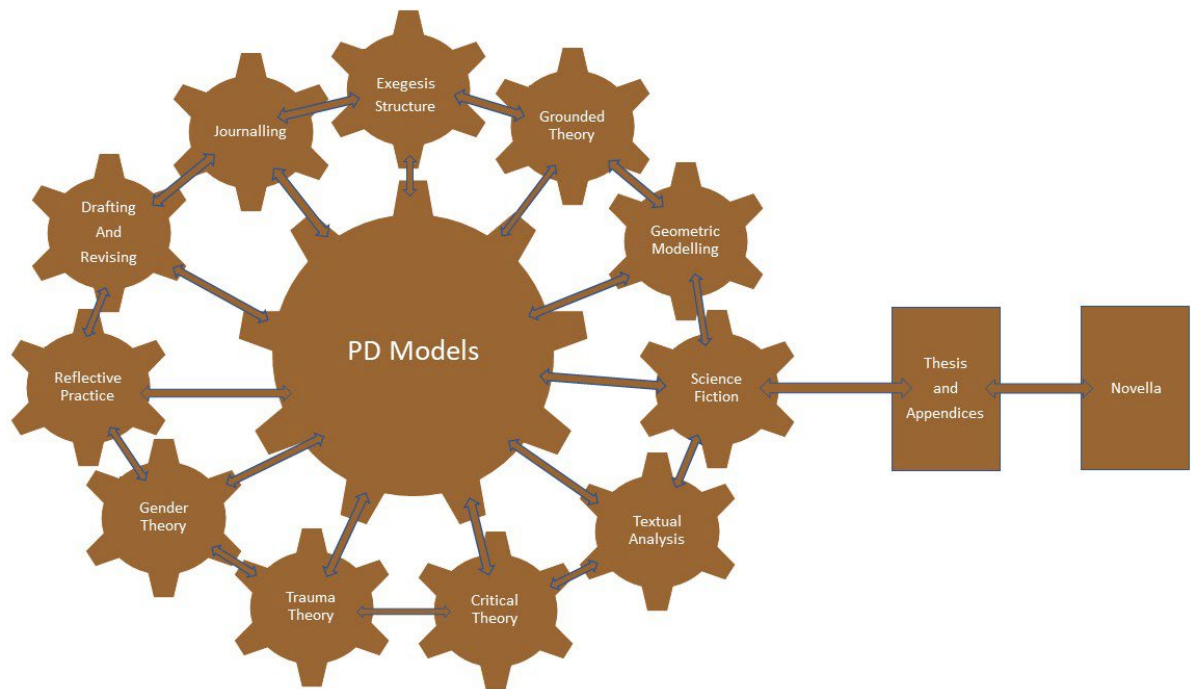Figure 3.1: Overall Relationship of the Methodologies and Methods to the Project

Figure 3.2: Influence of Research-based Practice to the Methodologies and Methods and the Project

<u>Method 1: Exegesis Structure</u>

Introduction: The differing and nuanced views of the fused exegesis and transdisciplinary methodologies and methods are explored in this section, and are narrowed to the methods applied by the researcher.

Theory and Analysis: Methods and their methodologies are research tools and have long been studied as evidenced herein. Literature review methods have been long studied as research tools (Webster & Watson 2002; Torraco 2005; Schryen, Wagner & Benlian 2015; Torraco 2016; Snyder 2019). Research exegesis frameworks are recognised in Creative Writing as research methods (Krauth 2011; Green and Williams 2018). What is lacking is a finding that research frameworks are "methods". The researcher finds that intradisciplinary, crossdisciplinary, multidisciplinary, interdisciplinary and transdisciplinary frameworks each limit and guide the knowledges incorporated in research projects, the unique synergisation of knowledges, and ultimately are "overarching" research methods as this project evidences.

Exegetical frameworks: Krauth (2011) notes that exegeses contain important records of creative writing influences. The researcher finds exegeses also operate as inspirational creative writing aids: evoke conscious and previously "subconscious" cognitive and embodied processing; provide structure for ideas; enable the analysis, criticism, creative development and advanced expression of distinctive ideas. Exegeses contain scholarly academic research (Krauth 2011) and make original academic contributions by filling research gaps in disciplinary or multiple disciplinary research contexts. Creative Writing theses are usually interwoven with the creative product (Krauth 2011) as the original novella and this original thesis shall evidence. There are no pre-established limits to the content and

form that Creative Writing exegeses can take, but they must meet rigorous disciplinary standards (Krauth 2011).

"[Exegeses] are entitled to break new ground in exegetical and artefact areas and must challenge existent forms" (Krauth 2011). Exegeses are diverse and symbiotically blend with Creative Writing creative works, and may be creative pieces, contain unique research approaches or be a combination of these and other approaches (Krauth 2011). An exegesis may structure information in unique ways leading to the original syntheses of knowledges and original production and as a result are overarching research methods for these reasons.

The researcher adopts a standard interdisciplinary/transdisciplinary social sciences framework in this "hybrid exegesis-thesis" (the "thesis"). Using Research-based Practice, the researcher fuses together the divergent transdisciplinary-exegesis-social science frameworks and multiple disciplinary knowledges, which shall enable the researcher to thoroughly investigate the PD models and produce the research products. This thesis will enable the researcher to contribute towards the PD models' multiple disciplinary debate.

Transdisciplinary frameworks: Klein (2008) indicates transdisciplinary frameworks are methods in their own right. Klein (2008) finds transdisciplinary research to be a "generative process of harvesting, capitalizing and leveraging multiple expertise" and integrating multiple disciplinary knowledges regardless of tensions (Klein 2008, p. S116).

Klein states that transdisciplinary studies enable "new epistemic communities" to be birthed and "new cultures of evidence" to form (Klein 2008, p. S116). Alfonso Montuori finds

transdisciplinary studies to be "inquiry-based" rather than discipline-based, and integrate knowledge and include the inquirer, are meta-paradigmatic, and apply "systems" and complex thinking (Montuori 2013, p. 45). The researcher's project is inquiry based and does not fit under any pre-generated research paradigm. Rather, this transdisciplinary study presents as a unique method and certainly in conjunction with Research-based Practice, as a necessary and perfect fit for thoroughly investigating the PD models and their influences. This thesis shall contain knowledges and processes from multiple disciplines.

Transdisciplinarity, moreover, considers knowledge is a "vast web of relationships that are interconnected and form a larger ecology of ideas" (Montuori 2013, p. 46; Fabbri & Munari 1984; Morin 1991). The researcher finds that transdisciplinary studies with divergent knowledges, in this case synthesised through Research-based Practice, may be likened to machines with complex designs with multiple parts performing different actions in order to "solve a problem". Transdisciplinary studies are highly functional and effective in solving the most serious and difficult of complex problems.

Montuori confirms transdisciplinary studies are "defined by the needs of the subject matter, not determined or guided by the parameters of the discipline" (Montuori 2013, p. 46), which makes them unique. Transdisciplinary boundaries can be broad or small, even obscure. Transdisciplinary projects can be highly informative, solution orientated and may inform a number of disciplines (Montuori 2013, p. 46).

Theory criticisms: Theses are highly individualistic in the Creative Writing discipline and are used to record researcher influences in producing an original novella that fills a Creative Writing knowledge gap. Individualism is a strength in Creative Writing research, which the

researcher envisages these original research products shall exhibit. In their defence, quality Creative Writing theses display a strong symbiotic relationship with the creative work and other research products. A thesis should engage with critical theory and/or creative practice, contain research methods, approaches and documentation showing the capacity to structure and communicate ideas in a scholarly manner, and display proficiency in execution and presentation and be ethical (University of Southern Queensland 2022). Creative works are similarly assessed, but in addition must display innovation in an established genre or subvert or expand the field and be creative, imaginative and or stimulating (University of Southern Queensland 2022).

Transdisciplinary literature reviews gather material "scattered in so many different fields" (Montuori 2013, p. 46). While this is a criticism in intradisciplinary confines, it is certainly the strength of transdisciplinary inquiries assisting researchers to solve complex research problems. Multiple disciplinary knowledges do not always fit well together but equally are not required to blend in standard transdisciplinary projects.

Conclusion: The researcher will use this transdisciplinary thesis framework and together with Research-based Practice to incorporate divergent knowledges and fuse them as required. Both methods will be used to combine this knowledge in ways that enables the researcher to answer the research questions.

Method 2: Grounded Theory

Introduction: The differing and nuanced views of grounded theory methodologies and methods are explored in this section, and are narrowed to the methods applied by the researcher.

Theory and Analysis: Grounded theory assumes that theory can organically emerge from data (Urquhart, Lehmann & Myers 2009). The researcher is required to actively group and categorise the data and develop the theories that manifest with a degree of skill and objectivity (Glaser & Strauss1967; Strauss 1987; Strauss & Corbin 1998; Clarke 2005; Charmaz 2006; Corbin & Strauss 2008; Charmaz 2019). Grounded theory further assumes that theories may be tested and may change over time and have value and are useful (Glaser & Strauss 1967; Charmaz 2011). Glaser and Strauss confirm that theory that emerges from data should predict phenomena and may be "tested" and reassessed (Glaser & Strauss1967).

Grounded theory methods were developed by Glaser, Strauss, Corbin, Clarke, and Charmaz (Glaser & Strauss1967; Strauss 1987; Strauss & Corbin 1998; Clarke 2005; Charmaz 2006; Corbin & Strauss 2008; Charmaz 2019) as an evidence-based step-wise approach for developing theory. Grounded theory as a theory development method is constantly evolving (Charmaz 2011). Researchers may vary or adapt grounded theory approaches as required making grounded theory a highly flexible method for developing theories (Glaser & Strauss 1967).

The grounded theory process enables data to be interrogated a number of times until linked and verifiable theories emerge (Bryant & Charmaz 2007). No hypothesis or theory is usually set from the outset in grounded theory (Smith 2015). Grounded theory is also intuitive and involves empirical observation processes that are completely data orientated (Urquhart, Lehmann & Myers 2009). It is also a highly creatively generative process and draws on the researcher's own observations. When applied to human opinions, grounded theory enables rhetorical veils to be penetrated, theorised, analysed and tested.

Valde (2017) has examined four steps in grounded theory processes (Valde 2017):

Step 1: Data collection and analysis: the "tacking" back and forth from the data and coding.

Step 2: Coding the data: searching for similarities and differences, which can involve:

- open coding: grouping and categorising the data in theoretical hubs, using margins and questions;

- axial coding: connects subcategories with larger categories and finds theoretical relationships between categories; and considers theory conditions, actions/interactions and consequences; and

- selective coding: intentional coding that supports the core theoretical category.

Saturation occurs when there is nothing new to be learned.

Step 3: Grounded theory can then be written at the propositional stage and involves the use of narratives. This level of theory can be descriptive.

Step 4: Higher level, more abstract, theory can be developed from propositional theory.

Grounded theory implies levels of textual analysis and empirical observations as described in subsequent sections. Equally, textual analysis and empirical observations suggest "spontaneous grounded theory" may occur: an informal and often cognitive process that enables instantaneous and possibly highly workable theory to be developed by the researcher. Furthermore, grounded theory may theoretically interact with other theories (e.g. Marxist theories: ideological criticism) that are embodied in the research and apply as automatic lenses. Many cognitive lenses drive human thinking and there is not always a specific awareness of them. Reflection is relevant to the stages of grounded theory development.

Applications: Grounded theory shall be the researcher's method of choice for developing Aristotle Knowledge Development Theory and Practice Research Theory. The researcher will apply grounded theory as explained in this section, with the exception that the researcher may combine the approach with spontaneous grounded theory when necessary. Where there are gaps in methodologies literature for any of the methodologies in the methodologies and methods literature review, the researcher expects to apply spontaneous grounded theory to develop these methodologies.

The researcher's first grounded theory approach: The researcher shall adapt Valde's (2017) grounded theory approach for deriving an epistemological theory of knowledge from Aristotle's books' texts, and in four distinct phases. Phase 1: First, relevant information is selected. Not all of the textual information is relevant to knowledge development theory generalisation. The researcher in this instance identifies possible theory targets deriving from textual theories, methods, practices and processes during the data collection and analysis phase. Phase 2: Open coding then occurs, where the researcher will investigate, compare, conceptualise and categorise data using specific terms as identifiers, which may be generated

line-by-line (Valde 2017; Strauss & Corbin 1998). This is a significant step towards theory building. This will enable the researcher to develop primary theoretical subcategories. Phase 3: Axial and selective coding combined: the axial coding phase involves specific theoretical concepts being generated from subcategories (Valde 2017; Kuckartz 2020); selective coding core categories will be further undertaken and solidified during the selective coding phase (Valde 2017; Kuckartz 2020). This phase will involve the writing up of detailed propositional theories which the researcher will later use for developing the fundamental umbrella theories. Phase 4: The final umbrella theories phase involves theories being recorded at their highest level of abstraction and as an appropriate reflection of final theory or theories (Valde 2017; Strauss & Corbin 1998). In the researcher's view, this theory generated will have the broadest implications but is expected to be highly abstracted and theorised.

The researcher's second grounded theory approach: The Aristotle Knowledge Development Theory will form the basis of the next theory being developed: Practice Research Theory will be developed from core texts and by the researcher more efficiently due to the researcher's familiarity with practice research theories in Creative Writing research. The additional theories will be drawn from a range of relevant texts using grounded theory approaches described in this section. Practice Research Theory will be developed in the same four phase process as described earlier in relation to the development of Aristotle Knowledge Development Theory. Research-based Practice is expected to be a portable version of Practice Research Theory and is expected to be a highly creative research and literature review method, which can be incorporated into any research framework and complement existing research methods.

Theory criticisms: Coding, however, can be time consuming (Sifat 2018). Data interpretations may be subjective but this can also be a strength. Theories may be considered unreliable and limited. Existing grounded theory literature is narrow and project based suggesting specific and limited applications. Notwithstanding this, the continual testing and use of the data sources can enable the researcher to verify the findings or generate new theories. There are multiple approaches to grounded theory derivations, the choice of which should be in the hands of the researcher guided by the project needs. The researcher should validate data analysis, thoroughness and connectivity between the data sources and any theories produced in every application of grounded theory methods.

Conclusion: Grounded theory is a highly rigorous approach for developing theory. The theory emerges from the data and is always reflected in the data. The researcher will use grounded theory to develop key theoretical frameworks using slightly condensed steps outlined by Valde (2017) in key phases. The elements of thoroughness and connectivity to the data sources are highly important in grounded theory theory development.

<u>Method 3: Geometric Modelling</u>

Introduction: The differing and nuanced views of mathematical modelling methodologies and methods, broadly, leading to geometric modelling, specifically, are explored in this section, and are narrowed to the methods applied by the researcher.

Theory and Analysis: Mathematical modelling theory begins with the idea that there is a "desire" to model an object mathematically (Kokomo & Emvudu 2016). There exists an assumption that it is appropriate to model an object (Umulis & Othmer 2012; Jost et al. 2018), that the object may appropriately be abstracted or quantified (Umulis & Othmer 2012; Jost et al. 2018). Mathematical modelling requires the translation or conversion of a phenomenon into mathematical form (Kokomo & Emvudu 2016; Dundar, Gokkurt & Soylu 2012, p. 3465). Modelling forms include formulas, equations, graphs or tables (Dundar, Gokkurt & Soylu 2012, p. 3466) and geometry. Testing and refining of a model occurs before a model is finalised (Blum & Leiss 2007). Mathematical models are preferably elegant and economical. Mathematical models are used to describe, predict or understand a phenomenon and usually have real-world applications (Kokomo & Emvudu 2016)

Modelling may descriptive (static and diagrammatic), predictive (statistical and predictive), scientific (speculating on the mechanisms of operation without bonding with real data) or philosophical (using partial data attempt to explain a phenomenon) (Kokomo & Emvudu 2016). Mathematical models may also be deterministic (describes the effect of causes), stochastic (describes random occurrences) or "fuzzy" (when the states being described are vague) (Kokomo & Emvudu 2016).

Kokomo and Emvudu (2016) investigated mathematical modelling and defined a standard methodology in which they define the modelling stages to include:

- deciding what aspect of a model one wishes to intimate, physically describing it and making assumptions;

- ascertaining if the phenomenon is dynamic (evolutionary) or static (non-evolutionary); and

- if the model is dynamic, then the "discounted" "model" involves abstractions concerning the state of space (non-isolated or isolated points), the space of time (continuous or discrete), the initial conditions, and a family of movements, variables of state (time-dependant quantities, with either given or unspecified causes); noting that the "spaces of state, of time as well as the description of the variables of state belongs to the assumptions of modelling".

A simple dynamic model is formulated by them (where Y is a measured variable state with respect to time and $\Delta t > 0$: $Y(t + \Delta t) = Y(t) + E - S$; where E is entry/entries and S exit/exits) representing the change in the state of an object with respect to time, factoring entry and exit points (Kokomo & Emvudu 2016, p. 150) which led to the dynamical system described in Table 3.1:

Table 3.1: Dynamical system resulting from the nature of spaces of time and state

Time	Space	Dynamic System
Continuous	Continuous and heterogeneous	Partial differential equation (PDE)
Continuous	Continuous and homogeneous	Ordinary differential equation (ODE)
Continuous	Discrete	ODE
Discrete	Continuous (homogenous or heterogenous)	Differential equation (DE)
Discrete	Discrete	DE
Discrete + Continuous	Continuous and homogeneous	DE + ODE
Discrete + Continuous	Continuous and heterogeneous (partially)	DE + PDE

(Kokomo & Emvudu 2016, p. 150)

Mathematical testing, analysis and validation processes then occur (Kokomo & Emvudu 2016).

Geometric models or shapes are symbolic of patterns that appear naturally in nature or derived otherwise. Hypothetically, one "dimensional" objects are represented by a line and 2-dimensional objects by a surface which can be stylised in the form of a standard geometric shape. Pythagoras's theorem ($a^2 + b^2 = c^2$) enables right triangle side lengths to be ascertained when two side lengths are known, which may involve trigonometry. Any object of n-dimensions, hypothetically, can be geometrically stylised and then measured using 2-dimensional or 3-dimensional right triangles. The triangle then is the "universal shape" and is expected to be the geometry explored by the researcher in the original PD models' design.

Mathematical models are "narratives". The researcher's PD model is expected to engage with narratives. Creative writing contains models in narrative form. Creative writing modelling processes are similar to mathematical modelling processes. There is a desire to model an

"object" using creative writing; there is an assumption that it is appropriate to model the object, and that it may be abstracted; a translation of the object from the real world into creative writing form occurs; writing can be elegant even economical; the models describe or predict real world phenomena; involve reconceptualising; drafting and revising; and testing, until the creative writer is satisfied that a model is satisfactory. Where mathematicians ignore sensory information and contextual information, creative writers fill in these "gaps". Creative writing allows for a greater variety of forms to be developed and creativity to flourish. Creative writers saturate their creative products with multiple layers of reality.

Creative Writing researchers use standard geometric patterns for crafting and interpreting narratives (Krauth 2006; Cantrell 2014: e.g. the lemniscate, spirals). Cantrell (2014) notes stories may be crafted using geometric shapes as a guide or used to compare and contrast a story's structure. "Dimensional" considerations may also operate (Cantrell 2014). Cantrell (2014) finds mathematical models may be embedded in Creative Writing research consciously or unconsciously during the creative writing process. Creative Writing mathematical models can be documented or implied and may reflect or illuminate real world phenomena. The researcher further notes that geometric patterns may be used to describe words, word groups, phrases, sentences, paragraphs and structures, which has learning and crafting implications, and engineering applications.

Notwithstanding this, creative writing engages with the full complexities of human expression and humanity and embodiment of experiences that may be enacted through live or recorded viewing and listening modes, and like all art offers diverse angles (even of the trigonometry kind) and viewpoints and images worthy of human exploration. Mathematics could too, but fundamentally is currently highly abstracted and limited. Textual analysis and

empirical observations are implied in mathematical modelling. Mathematical models may be designed to address ideological critical concerns or blatantly ignore them. Mathematics has been deliberately limited beyond the needs for abstraction. Mathematical models themselves are moral symbols, which shall be explored in the production of an original PD model. The researcher further considers that models that apply to humans should "represent the human" morally when appropriate, in terms of positive economic morality which shall be described by the researcher across the research products. The researcher could not find critical theory aspects of mathematical modelling satisfactorily addressed in mathematical literatures, but are certainly implicated in mathematical modelling. Mathematics relies heavily on drafting and revising strategies to effectively develop models and communicate concepts.

Applications: The researcher shall possibly develop an original PD model in reference to this section's analysis: in mathematical narrative terms; in algebra formula terms; and in geometric terms. Each will factor OIs. To confirm the validity of the researcher's mathematical modelling, the researcher is expected to prepare a mathematical modelling quality framework with real world implications for assessing mathematical models which otherwise appears lacking in the literature.

Theory criticisms: There are common errors in model constructions; existing biases found in assumptions; the blatant framing of rhetorical questions; and biases may also occur when data holes are "filled" (Towse & Drummond 1997). Data can be compromised if it is derived from more than one source (Towse & Drummond 1997). Interestingly, models that contain "positive" results are far more likely to be published, as opposed to those that contain "negative" results (Towse & Drummond 1997). This indicates mathematical cultural pressure influences modelling and may constitute a form of pre-existing bias. Modelling choices may

also be selected to produce biased results (Towse & Drummond 1997). Model estimates, however, may not be as reliable as real life studies and empirical research (Towse & Drummond 1997).

Methodologically and method-wise, mathematical models are subjective. No satisfactory overarching mathematical modelling quality design criteria has been developed (Towse & Drummond 1997) which could be used to assess the general quality and appropriateness of a mathematical model and assist with its construction. This may be remedied by this researcher. Mathematical models require decision-making and are symbolic of deeper hierarchical, ideological and philosophical preferences. These may be contextually explicit or implied and can be evidence in the object choice, the model produced, the level of abstraction or assumptions.

Conclusion: Mathematics is a language with similarities with other languages, in the same way that mathematical modelling is similar to creative writing modelling of narratives. The two are expected to converge in this thesis with the production of an original PD model. The researcher shall build and assess the original PD model based on a mathematical modelling quality framework the researcher is expected to develop. The original PD model shall be reflected in the original novella. Mathematics is accessible to Creative Writing researchers.

Method 4: Science Fiction

Introduction: The differing and nuanced views of science fiction methodologies and methods are explored in this section, and are narrowed to the methods applied by the researcher.

Theory and Analysis: Freedman (1987) finds that science fiction texts may be diverse and may not always be considered the perfect embodiment of science fiction:

> Accordingly, there is probably no text which is a perfect and pure embodiment of [science fiction] but, on the other hand, there are perhaps relatively few texts which lack the [science fiction] tendency altogether."
>
> (Freedman 1987, p. 182)

Science Fiction writing is heavily influenced by the theories of Karl Marx concerning the critique of the "capitalist economic system" or a "universally just and democratic way of life in the future as the goal of human history" (Csicsery-Ronay Jr 2003, p. 113). Marxist theories have also shaped other aligned theoretical perspectives popular in science fiction: including racial-critic and feminism (Csicsery-Ronay Jr 2003, p. 113). Liberating gender and races from the hands of capitalism and corporations can be found to exist in a volumous number of science fiction works.

Csicsery-Ronay Jr (2003) finds that science fiction may challenge contemporary conditions:

> In its simplest terms, [science fiction] and utopian fiction have been concerned with imagining progressive alternatives to the status quo, often implying critiques of contemporary conditions or possible future outcomes of current social trends.
>
> (Csicsery-Ronay Jr 2003, p. 113)

Csicsery-Ronay Jr (2003) notes in science fiction change is often crafted in terms of scientific discoveries or invention (Csicsery-Ronay Jr 2003, p. 113). Works in the West were dominated by H. G. Well's utopian technocratic elitism; and in the East by Ivan Yefremov grand-scale socialist-utopian writing (Csicsery-Ronay Jr 2003, p. 114 - 115). After the Second World War, anti-communist sentiment resulted in works incorporating laissez-faire capitalists, with Frederik Pohl and Cyril Kornbluth and the socialist Mack Reynolds, persevering with writing anti-capitalist science fiction (Csicsery-Ronay Jr 2003, p. 115). The civil rights struggle in the 1960s and the "sudden independence of European colonies" resulted, along with massive technological change and "opposition to institutions and polices of the bourgeois", in science fiction literature showing "respect for Marxist ideas" and a "powerful, unformed desire to rid the world of poverty, racism, sexual repression and economic exploitation" (Csicsery-Ronay Jr 2003, p. 115 - 116). During and post the Cold War, science fiction writers sought to solve the problems of the world in part (Csicsery-Ronay Jr 2003, p. 116) and during this time science fiction works from Frank Herbert, Robert Heinlein and Kurt Vonnegut became immensely popular (Csicsery-Ronay Jr 2003, p. 116). Freudian psychoanalytical and Marxist class consciousnesses began to merge (Csicsery-Ronay Jr 2003, p. 116).

Many Marxist concepts have been "adopted by feminism, race-criticism, queer theory and cultural studies" (Csicsery-Ronay Jr 2003, p. 113). Marxism is seen as weakened since the "ascendancy of multinational capitalism" (Csicsery-Ronay Jr 2003, p. 113). China's ascendancy is a major example of Marxist success. Corporations themselves have become quasi governments or mini systems of government. Worth noting is that Marx considered that technology could liberate humans or exploit them (Csicsery-Ronay Jr 2003, p. 114). The Marxist historical model is used in "racial and feminist thought":

> It frequently models racism and sexism on bourgeois ideology, as racial hegemony and patriarchy are modelled on the capitalist mode of production.
>
> (Csicsery-Ronay Jr 2003, p. 113)

Queer theory is also strongly evident in science fiction. Queer theory science fiction writers include John Varley and Melissa Scott (Pearson 2003, p. 157). Queer theory is sceptical about epistemologies that fix sexual orientation (Pearson 2003, p.157). In this subgenre:

> [Science fiction] describes bodies, genders, sexualities as fluid is much more in harmony with approaches that celebrate fluidity, liminality and other radical tactics for deconstructing the rigidity of binary identity categories
>
> (Pearson 2003, p. 157)

Startling imagery, technology, high-tech characters and consequential themes appear in the science fiction genre. Science fiction inspires and predicts science (Zuin 2017; Fussell 2013; Popova 2014). New scientific or otherwise models of reality are produced and explored in the genre (Sterling 1998; Neeper 2012; Stross 2013). Science fiction equally performs an

educational role by imparting knowledge on existing, new and emerging sciences. Hard science fiction enables writers to conceptually explore and challenge the bounds and possibilities of science and inspire innovation (Ansell 2019). The science fiction genre is an appropriate genre for the researcher's Creative Writing novella, which shall subvert Marxist themes by focusing on the consequences of the PD models and an original PD model in society.

Science fiction also assumes levels of "spontaneous" grounded theory, textual analysis, empirical observations, ideological criticism and critical theory occur as required. This may be seen in themes, settings, character arcs and other features of science fiction writing.

Applications: The researcher shall possibly incorporate Marxist themes (e.g. capitalism and semi-utopian ideals), but subvert them by focusing on economic morality and eradicating selfish binaries in society. Furthermore, the researcher may subvert the science fiction genre through overtly fusing the future with the past, and bring the genre closer into affecting other genres, and affecting current consciousnesses and aspirations. The researcher is expected to draw on gender theory in deconstructing gender binaries and shall write towards a truly non-binary future with gender fluidity. This shall be explored further in a literature review binaries section and gender theory methods section.

Theory criticisms: Science fiction generally may engage in "formalistic reductionism which abstracts texts, and groups of texts, from the specific, socially identifiable communication systems in which they function" (Schulz 1987, p. 165). Accessibility and variety can be unattainable in certain subgenres for certain readers. Writing styles can further appear crude or literary or overly technical, and cater to specific audiences. Science fiction and fantasy

share similarities, but a merger of the two has not occurred, but it is nonetheless acceptable to combine perspectives. Science facts in science fiction can be misleading, which is a problem from a science educational perspective. Science fiction writers may communicate ideas overtly, with normal effectiveness, or subtly. The researcher will ensure the original novella is written clearly for broader audience appeal.

Conclusion: The science fiction genre is an appropriate genre for the researcher to write an historical and futuristic text regarding the PD models and an original PD model, while further critiquing binaries in society and writing towards the removal of binaries. The researcher may incorporate elements of Marxism but will subvert them through deconstructing the selfish binary and economic morality. Gender fluidity may be explored in the novella. The novella itself must be accessible to a wide range of audiences and especially in light of the goal of the researcher to potentially deconstruct the extant world of binaries and write towards a future without them.

Method 5: Textual Analysis

Introduction: The differing and nuanced views of textual analysis (and fused with ideological criticism) methodologies and methods are explored in this section, and are narrowed to the methods applied by the researcher.

Theory and Analysis: Fairclough (2003) explains textual analysis: "What is 'said' in a text is 'said' against a background of what is 'unsaid', but taken as given. As with inter-textuality, assumptions connect one text to other texts, to the 'world of texts' as one might put it" (Fairclough 2003, p. 40). Textual analysis can be extended through ideological criticism, which is Marxist theory based and enables the deconstruction of texts referencing the "powerful, unformed desire to rid the world of poverty, racism, sexual repression and economic exploitation" (Csicsery-Ronay Jr 2003, p. 115 - 116).

The Creative Writing research textual analysis method will be used extensively by the researcher throughout this project to interpret and form opinions from specific information, observations and knowledge (i.e. a "text" is "anything" (McKee 2003): language, symbols, pictures, numbers, objects) and to derive contextual, verifiable or creative meaning (e.g. historical, cultural, political, or ethical meaning) (Allen 2017; Mills, Durepos & Wiebe 2010). Textual analysis can involve inductive, deductive, semantic and latent textual analysis interpretative approaches (Caulfield 2019). Textual analysis literary analysis is used to examine connections between or from combining different texts or strands, to spontaneously confirm or determine intended or unintended consequences (Caulfield 2019).

There are many different textual analysis approaches and techniques which may be scientifically applied, use formal coding, or are observational and reflective. Hawkins (2017) notes that a variety of methods may be used in textual analysis including qualitative, quantitative, rhetorical and critical approaches: and this angle enables the researcher to creatively bond textual analysis with ideological criticism when appropriate. Nevertheless ideological criticism as a sub-branch supports the classification, analysis and deconstruction of inhumane and immoral inequalities.

Textual analysis methodology concerns the process of discovering meaning from communication in "texts" (objects) relative to social structures. A primary text can be understood with the aid of secondary texts: for example, texts that examine economic goals through Marxist theories. The researcher is always implicated in the interpretation of a text:

> Each researcher, audience, or viewer brings understandings of the world, which shape the interpretation of the text. Investigators are often interested in how people reading or viewing the text experience the text. The receiver's life experiences influence how the text under investigation is interpreted. Both the influence of the creator of the text and the researcher analyzing the text also add to making sense of how the text was intended to be understood, and how the text at present becomes understood.
>
> (Hawkins 2017)

Interpretation influences in textual analysis include the "(a) the analyst's worldview, (b) cultural, historical, political and social understandings of the environment within which the text was made, and (c) attempting to understand what the author or creator of the text intended at the time the text was written/created" (Hawkins 2017). Realists suggest texts may be examined from the cultural view of the researcher; structuralists consider that different cultures have similar structures and people; poststructuralists consider that different cultures

view the world differently (there is scope for differences in opinions) (Bainbridge, Goc & Tynan 2011). Cultural and subcultural norms influence text interpretations; and implicit (subtext) and explicit norms are deemed influenced by the historical contexts (Hawkins 2017).

Empirical observations must be made before textual analysis occurs; thus empirical observations are bonded to textual analysis. Empirical analysis is discussed in the next section in relation to Critical Theory, which has formally considered bonding the two approaches (Stanford University 2005).

Ideological criticism is a form of textual analysis, involving references to "ideological critical texts", and has foundations in Marxism and is linked to Marxist influenced critical theories. Johnson (2019) argues that ideological criticism should examine neo-liberalism through texts theoretically from the agreeance of Horkheimer's (1972) view of "historical development against the needs and struggles of real human beings" (Johnson 2019, p. 811). Ideological criticism in this context considers the world through lenses of "oppression, exploitation and war" as "nonhuman natural processes" (Johnson 2019, p. 812) that are the machinations of "the world of capital" (Horkheimer 1972, pp. 207-208). Ideological criticism is concerned both with uncovering norms of a just society and unmasking all forms of artificially-derived domination of others in society, linked with inequality and subjugation (McNay 2013). Inequalities of sex, race and class are interrogated in this critique. Political demands for recognition by minorities or minority issues, according to Honneth (1995), are moral offenses and deny esteem. Subsequent disrespect is then the entryway towards the immoral cognitive and physical dominion and control over others (Honneth 1995). Dominion and power relations are central to inequality and are realised through suffering (McNay 2013).

Textual analysis and ideological criticism, suggest that empirical observations are applied before meaning is derived and assessed through texts. Textual analysis itself implies a level of spontaneous grounded theory occurs. Textual analysis also implies that connecting research texts in unique ways constitutes original research.

Applications: Textual analysis shall be the over-arching analysis tool employed by the researcher, a theoretically portable and rigorous approach and is fused with ideological criticism when required. Textual analysis will be the major interpretation device of key texts in the thesis but also bonded with ideological criticism, including for analysing the PD models, statistics, law and economics, empirical research, experiments, psychology, and Creative Writing research.

Harmful human practices that promote the "non-human" treatment of others shall be holistically explored, exposed and addressed, depending on the research subject matter and context. Economic morality as a construct shall be explored. The researcher may examine monumental, entrenched and destructive master-slave relationships that are mythologised. Associated forms of binary and economic suffering resulting from economic immorality, which are implicated on the ground in insincere attempts at economic morality, shall be examined in the original novella.

Theory criticisms: Textual analysis is subjective; ideological criticism, likewise, as a textual analysis aid. Subjectivity, or the view of the individual, however, can render new and powerful insights or contribute to group views; even contribute to the broader field of the "universally known" through the collective consciousness (Smith 2014; Foucault 1977).

Bleich finds interpretative parameters are broad and not derived from controlled experience, but rather "uncontrolled experience" (Bleich 1975). Objective criteria can be enmeshed with biases and so can subjective criteria and evidenced through research choices. The goal of objectivity, however, is fundamental.

Conclusion: Textual analysis, and when required bonded with ideological criticism, will be the broad interpretive lens the researcher will use to interpret data: drawing on secondary "texts". Textual analysis enables multiple texts to be referenced, while Marxism underlies ideological criticism. Again the researcher shall subvert Marxism views towards deconstructing selfish binaries lenses and examining positive economic morality in the original novella. Textual analysis will be applied in all original research products.

Method 6: Critical Theory

Introduction: The differing and nuanced views of the critical theory (and fused with empirical analysis) methodologies and methods are explored in this section, and are narrowed to the methods applied by the researcher.

Theory and Analysis: Critical theory's normative task cannot be accomplished apart from the interplay between philosophy and social science through interdisciplinary empirical social research" (Horkheimer 1993; Stanford University 2005). Empirical research enables a sensory description of the world; critical theory then explains "how the world could be in a normative ideal" (Supa 2009). Critical theory "must explain what is wrong with current social reality, identify the actors to change it, and provide both clear norms for criticism and achievable practical goals for social transformation" (Stanford University 2005). "In [the] efforts to combine empirical social inquiry and normative philosophical argumentation, Critical Theory presents a viable alternative for social and political philosophy today" (Stanford University 2005). This researcher will fuse empirical and normative arguments through critical theory's lens in the researcher's quest to determine what is happening in the world and how the world can improve.

The first analysis: an empirical analysis: stresses the factual basis of sensory data and are supported by John Locke's and David Hume's philosophies, may be grounded in rationalism and pure reason, even religion. René Descartes' and Gottfried Leibniz's philosophies considers that faith plays a role in making sense of the world. Immanuel Kant effectively synthesised both approaches or a synthesis of these two approaches, considered that pure reason depends on the ability to discover "verifiable factual truths" (Morrow & Brown 1994,

p. 43-44). Empirical methods of observations can apply to qualitative but also quantitative data and are applied to both in this study: may involve deductive logic, inductive patterns and or abductive insights (Bradford 2017): e.g. the "gut-feeling" or cognitive "revelation" (Cleff 2019, p. 8) or experience. This suggests the embodiment of knowledge. Empirical analysis (including empirical observations) are prerequisites for a critical theory analysis to occur (Stanford University 2005).

The second analysis: a critical theory analysis: enables the researcher to consider what is wrong and what can be done to remedy it. Karl Marx's and Max Weber's theories and associated social science theories, enable researchers to determine significant problems in society: are concerned with the contradictory features of capitalist and capitalist-religious modernity, a theme expressed with regards to alienation (the expansion of the market system and the commodification of social relations), rationalisation linked with bureaucratization and the effects of science and technology (Morrow & Brown 1994, p. 13; Löwith 1982; Sayer 1992). Critical theory further assumes that the nature of society should be grasped or sensed through its "historical totality" rather than through its mechanical or abstract functions (Morrow & Brown 1994, p. 14). Lumen (2022) states:

> A significant strength of the Critical Theories Paradigm is that it combines theory and practice, seeking to create actual change from theoretical development. Rather than seeking prediction and control, or explanation and understanding, critical theories seek positive social change. The intent behind these theoretical perspectives is to help empower those whose world-views and ideological perspectives have not found equality in social contexts. At their best, critical theories have the potential to enact large-scale social change for both large and small groups of people.

Critical theory assumes some level of ideological criticism has occurred, even spontaneously, and thus is bonded with ideological criticism. Critical theory applies in the arts, humanities, social sciences and law, and mathematics, health sciences and science generally: although to what degree is yet to be assessed (Marinopoulou 2019). Marinopoulou (2019) notes critical theory's applications to sciences (and later finds how science is applying and limiting critical theory):

> Critical theory situates science within the quest for social and political rationality. It indicates that science's normativity – which answers the question "what should science do?" – orients itself in relation to the a priori potential of society. The latter for critical theory transforms itself into concrete political vindications for science.
>
> (Marinopoulou 2019)

Empiricism and critical theory implies textual analysis has occurred. Furthermore, critical theory implies that an ideological criticism analysis has occurred. Critical theory also implies that spontaneous grounded theory occurs.

Applications: The researcher will make empirical observations during the research process and is expected to assess whether broader critical theory concerns are evident and to what extent they can be addressed. This thesis is very much derived using ideological criticism-critical theory, through a need to take action and remedy major problems with the PD models. The researcher will address the PD models' harms through the original research products.

Theory criticisms: Antagonists of critical theory suggest it is overtly rational and realistic, obscure and elitist, and undermines the scientific method (Morrow & Brown 1994, p. 26-28). The researcher considers rationality and realism a strength, and the degree to which the scientific method is scrutinised by these considerations is a necessary contribution in determining the validity of scientific studies. The obscureness of critical theory literature, as it applies with empirical analysis, is a valid claim, but the blame lays in abstract writing. Abstraction in research writing is acceptable. Gross abstraction fails to effectively communicate meaning and ideas, and hides the information, thus should be open to intense scrutiny. Critical theory may be contested on the basis of differing social norms and therefore is not necessarily objective. Likewise, empirical analysis can be subjective. Nevertheless, objective arguments may be made for subjective reasons.

Conclusion: The researcher will use empirical observations and critical theory to understand what is occurring in the various worlds to be inhabited by the researcher in this project and its components and to what extent these worlds can be improved. Empirical observations and critical theory shall be applied to generate all of the original research products.

Method 7: Trauma Theory

Introduction: The differing and nuanced views of trauma theory methodologies and methods are explored in this section, and are narrowed to the methods applied by the researcher.

Theory and Analysis: Trauma theory developed as a reaction to trauma and the deliberate oppression of persons suffering trauma. Trauma is defined by the researcher as the body's response to a traumatic (awful or terrible) event. Trauma theory developed in response to human experiences of trauma, including trauma initially rejected by psychiatrists e.g. victims of railway accidents (Anderson 2012, p. 4). Freud suggested that a logical explanation for his patients' "feelings of being choked, and seizures" were "sexual trauma" (Anderson 2012, p. 1): sexual abuse. Due to similarities with other trauma, significant legal floodgates and income issues, Freud allegedly changed his views and thereafter suggested patients were culpable or were inventing or exaggerating "stories" (Anderson 2012, p. 1; Herman 1997, pp. 131–132). Freud's theory of "incestuous desire" or exaggeration, in the absence of deliberate manipulation for gain, do not reconcile with logic, are a serious form of oppression and should constitute a thorough re-examination of Freud's findings.

Soldiers during and post the First World War, returned and were blamed for acting "like hysterical women" (Herman 1997, p. 20). The Vietnam veterans Association in USA in the 1980s led a campaign to influence the American Psychiatric Association to accept war trauma as PTSD (Anderson 2012, p. 5), and it was eventually accepted. The PTSD diagnosis was extended to victims of sexual and physical and life threatening trauma (Anderson 2012, p. 5-6). Other causes are now "considered" and a range of symptoms defined.

Anderson (2012) notes that trauma theory is now a category of literary criticism and notes that Creative Writing researchers and trauma victims "were employing traumatic characters long before there were theories to support them" (Anderson 2012, p. 9).

Psychoanalytical theories of trauma consider that trauma may be culturally relevant (Nasrullah Mambrol 2018), focuses on the sensory, the hidden and the observable: e.g. through disregulation in emotional and social organisation, perceptions including paranoia as tell-tale sign of externally-caused PTSD and reactive behaviours (Freeman et al. 2013), narrative, repression and rising hysteria, suffering and oppression (Nasrullah Mambrol 2018). This implies "paranoia" is more than "delusions" and is manifest from external stressors. Prisoner harms and prison surveillance are also a cause of PTSD and trauma (De Veaux 2013). Stephens (2018) notes that PTSD and trauma occur in "corporations", through stressful encounters and the pressure of "job insecurity", workforce casualisation demands, contracts of any length, work overload and unrealistic or impossible targets; and "bullying and harassment" through "mind-games", public humiliation, providing pointless tasks; and physical responses, including managerial aggression, competition aggression, aggressive customers; and shift work stresses; and reactions linked to social absenteeism (Stephens 2018).

Trauma has acute and chronic causes and is linked to Marxist oppression beyond clear nature-orientated non-human related causes or omissions; and is a significant cause of poverty, and major cognitive and physical health problems (Goodman & West-Olatunji 2008). Trauma, however, is rather couched in terms of the psychology of the "mind" mythologies. However, pharmaceutical "interventions" significantly target traumatic injury in the body, including the central nervous system, cognitive processes, cognitive processing and

"knowing" and sensory responses. Trauma suggests, then, external causes; and the severe damaging of the "body": Marxist theories then highly inform trauma theory.

Trauma theory is linked with Marxism, but furthermore empirical observations and textual analysis are required to make "trauma theory" work. Ideological criticism and critical theory can be implied and relevant when forming trauma theory findings and applications. Spontaneous grounded theory may apply in the process prior to applications of ideological criticism. Trauma theory and gender theory may intersect.

Applications: Trauma theory shall be central to the researcher's psychological and physical effects' analysis and findings regarding the PD models, and shall inform the content of the original research products.

Theory criticisms: The physical causes of trauma are often contested in medical interventions and often through the "mythical model of the mind" which are capitalist attempts to subvert trauma theory. Nevertheless, trauma theory acknowledges external causes of trauma and worsening of trauma and seeks the holistic eradication of trauma.

Conclusion: Trauma theory moves beyond medicine's obsessive focus on the individual in trauma injury, towards external mostly human causes, and enable expressions of trauma to be catalogued and investigated often in areas ignored or rejected for intervention by administrations. The researcher may apply trauma theory as expressed in this section in an original novella. Trauma theory shall inform the investigation of the PD models and possibly data analysis in this original thesis and shall be reflected in other original research products.

Method 8: Gender Theory

Introduction: The differing and nuanced views of gender theory methodologies and methods are explored in this section, and are narrowed to the methods applied by the researcher.

Theory and Analysis: Gender theory was initially concerned with discrimination and violence against women, and later the market-based gendered exploitation of women (Beetham & Demetriades 2007, p. 201). Gender diversity and profound influences on gender are strongly implicated in gender theory.

Gender binaries are challenged in favour of diverse views on how gender may be performed or experienced (Fontanella, Maretti & Sarra 2013, p. 2553). Gender is something that is "done" and is beyond "proscriptions" and can alter (West & Zimmerman 1987). "Gender identities are conceived as plural, multidimensional, difficult to demarcate or classify" (Fontanella, Maretti & Sarra 2013, p. 2554). Gender can be "fluid" (Bauman 2003) and can include a multiplicity of identities (Fontanella, Maretti & Sarra 2013, p. 2554). Feminist theories have conceptualised fluidity as moving between multiple identifications (Sweetnam 1996) which will be a focus for the researcher in the novella. The gender theory methodology the researcher draws on is grounded in gender diversity which is connected to diversity in race, ethnicity, class, sexuality, age and even disability, and may have different effects including in the marginalised (Beetham & Demetriades 2007, p. 2000).

Ann Burnett (2017) notes the historical development towards gender theories and methods and approaches used to examine gender influences: beginning with the feminist suffragette

movement, women entering the workforce during the Second World War, the women's liberation movement and connected with the anti-slavery movement, and oppression through "identity intersections" of womanhood. Positivist theories have an interesting focus on internal causes of gender and communication (examining the body, including cognition and defining gender goals). Interpretive theories consider anthropology (cultural influences), symbolic interactionism (gender identification) and gendered speech communities (through which people are socialised). Cultural forms of gender affect interpersonal relationships, family, education, media and raises issues of power imbalances and violence in many settings.

Gender theory is linked with Marxist theories of the oppressed in literary criticism and are still being deconstructed. Gender theory anticipates the use of empirical observation, textual analysis, ideological criticism and critical theory; and spontaneous grounded theory, when identifying theories from "texts" that link with gender theory. Gender and trauma theory may also intersect.

Applications: Gender theory decries binaries and the researcher anticipates examining gender theory issues in the deconstruction of selfish binaries which the researcher notes exist in the PD models' narratives. Gender theory applications will be weaved through the original novella, PD model and thesis.

Theory criticisms: Opponents of gender theory seeking to suppress it, claim it is a result of some kind of aberration and that it will unravel society. There is no evidence for this. Gender reforms around the world have not unravelled society, but oppression in all its forms must be countered and dismantled. Gender theory's focus on persons of different sexes to be freed

from major patriarchal oppression, to have more freedoms and choices, is right; and challenges to that may involve binary violence. Therefore, eradicating binaries in society may support gender theory's non-binary goals.

Conclusion: Gender theory decries gendered oppression and supports the dismantling of oppression in all its forms. The PD models are limited by binaries and since the researcher anticipates deconstructing them and the selfish binary generally, expects to deconstruct gender binaries in all the research products.

Method 9: Reflective Practice

Introduction: The differing and nuanced views of reflective practice methodologies and methods are explored in this section, and are narrowed to the methods applied by the researcher.

Theory and Analysis: Reflective practice enables Creative Writing practitioners, other practitioners, researchers and professionals to reflect on, learn from and respond to the subject of reflections. Pockett, Napier and Giles (2011) finds:

> Being a critically reflective practitioner enables practitioners to engage with varying perspectives or ways of understanding situations and competing courses of action; to meet with more confidence the challenges that arise from these competing positions; to gain a more in-depth understanding of ethical dilemmas in their practice, and to encourage new ways of thinking. Practising in a critically reflective way focuses conscious attention on the 'whole self' of the practitioner: the thinking, feeling, believing, acting practitioner. A better understanding of the assumptions on which our actions are based and an awareness of our subjective position can lead to making changes to our practice.
>
> (Pockett, Napier & Giles 2011, p. 9)

Reflective practice, reflection-in-action and knowing-in-action are concepts developed by Schön (1983). Reflective "conversations" enable examiners and practitioners to learn what individual practitioners did, and what knowledge-base and learned experience they drew upon in their research or applied, what the results were and what change was recommended (Schön 1983, pp. 8 and 63). The act of reflection itself is a psychoanalytical practice that fundamentally draws the researchers' efforts towards what was and was not achieved, what

worked and what did not, and how it may be improved subsequently (Schön 1983). Reflections recorded provide for tracking, learning and change and continuous improvement.

Jane Fook (2002) considers critical reflection is engaged through: reflective theory and practice (be aware of the theories and assumptions in practice which may involve challenging or developing theories); reflexivity (to examine one's position holistically in the reflective subject); postmodernism and deconstruction (critical reflection to deconstruct thinking); and critical social theory (unearth ideological assumptions and choose to respond to them).

The Creative Writing research practice of reflective writing, enables researchers to assess their writing growth (Grand Valley State University 2010) and as critical self-reflection in all aspects of the creative writing thesis and creative work (Green & Williams 2018). Reflective Practice can be engaged informally or formally, structured or unstructured and various combinations of the same. Creative writing reflection, however, is "grounded" in the "who, what, when, where, why, and how" questions in describing textual representations and is empirical-based. It questions not only what was done, what should change, but what was learnt.

Reflection concerns making spontaneous or documented findings through the following methods: empirical observations, textual analysis, ideological criticism, critical theory and grounded theory. Refection is heavily centred in critical theory's taking action to move towards "normative ideals".

Applications: The researcher will examine all research products' content through Fook's (2002) lenses of "critical reflection". Reflections concerning this project occur through journalling, experimentation, index cards as described in the researchers Literature Review Structural Method, and spontaneously through the researcher's academic responses, and may be evident in all the research products. Reflections are essential for developing Creative Writing research and research generally. The researcher will document reflections in journalling and this original thesis, the results of which will feed into all original research products. Reflections are expected to be particularly helpful in the development of all research products.

Theory criticisms: Reflections are subjective and affected by competing focuses and pressures; normative ideals identified may be subjective; actions produced are not always comprehensive or appropriate. Reflections are a poor substitute for peer feedback and support; may highlight risks but may equally minimise them; assumes problems can be easily corrected. Those who reflect are not always aware of their own strengths and abilities and limitations. Nevertheless, reflections may result in immediate improvements; are a learning tool that may dramatically improve skills and direct users towards problem areas requiring attention. Lessons learned can be implemented straight away or documented for further use and considerations.

Conclusion: Reflection is a fundamental part of the learning process. The researcher shall apply this method in journalling and for developing all original research products. Reflection is vital but does not replace mentor feedback.

Introduction: The differing and nuanced views of drafting and revision methodologies and methods are explored in this section, and are narrowed to the methods applied by the researcher.

Theory and Analysis: Drafting and revising are processes through which a Creative Writing researcher constructs a story, and are applied in academic writing in both similar and different ways. Drafting and revising is the complicated nexus between ideas, their construction and development, recording of them and revising them for improvement. Cognitive processes are engaged prior to, during and post writing and editing. Writing can occur in "slabs" of communication, involving whole paragraphs or piecemeal, through the careful crafting of individual words, phrases and sentences. "Cognitive" drafting and revising may occur alongside "physical" writing and editing; with both being present or entering and leaving at different times in the writing process. Without drafting there is no creative or academic story; without revising, there is no publishable story or dissertation: editing is perfect for revising topic sentences in fiction and non-fiction, for ensuring details are accurate, to ensure words are economically and efficiently portrayed, points are clear and effective. Writing and editing are crucial for creative writing and academic writing.

Drafting and revising does not occur in isolation: the "blueprint" should exist from which the writing is constructed and referenced during editing (Hayes 1996). Writing structures may improve writing dramatically. Drafting and revising enables the crucial refinement of ideas for communication to be effectively transmitted from one person to another. There exists translation processes, between ideas and the communication of them: between the writer and

written text; and between the reader and the written text. We should write as "readers" ensuring the writer's intentions in communication can be translated easily. Skilled writers highly develop the "impression" they desire to leave in their reader's minds. Text-type and signpost structures should also be evident.

Drafting and revising is important for developing fluidity and precision and connections in writing, and improving comprehension. Words can be delivered brutally or with a musicality, or the impression of neutrality. A conversational style and tone is often helpful. Undertaking creative writing and or academic writing daily, like any knowledge or skill sought, shall improve creative writing and academic writing. Certainly, it results in the acquisition of high functioning written communication skills within the text-types. The act of reading how words are chosen, phrases, sentences and paragraphs are formed, achieving different purposes and across different works, are highly advantageous for improving writing and editing skills.

John Hayes (1996) proposed a new writing model strongly factoring drafting and revision domains that include: 1. Social environments: collaborators and audience; 2. Physical environment: state of the text and composing medium; 3. The "individual" motivation and affect: goals, predispositions, beliefs and attitudes, and cost and benefit estimates; 4. Working memory: phonological memory, visual and spatial sketchpad, and semantic memory; 5. Long-term memory: task schemas, topic knowledge, audience knowledge, linguistic knowledge, genre knowledge; 6. Cognitive processes: text interpretation, reflection and text production. Drafting and revision processes are complex.

Creative writing strategies to improve writing include reading and constantly writing: using literary techniques, "images", factoring audience and considering point of view; also

rewriting genre texts in different genres; learning important terms, words and phrases, and rewriting stories through a different point of view. Academic writing from disciplines can be deconstructed, important terms, words and phrases learned, knowledge learned and writing style practiced. Document editing software is accessible and may assist with grammar and spelling corrections. Reading slowly and out loud, and paying attention to grammar, the use of figurative, concrete and technical language is important for achieving writing aims.

Drafting and revision are elaborate forms of reflection (Hayes 1996). Thus, reflection blends with writing and editing. Drafting and revising also anticipates empirical analysis, textual analysis, critical theory and can generate engagement with ideological criticism. Mathematics relies on drafting and revising strategies to effectively communicate "messages". Indeed, so do all the sciences, social sciences, humanities and arts in university environments. It is important to follow your discipline's referencing style and apply grammar consistently in your work.

Applications: The researcher is expected to engage with drafting and revising processes at all stages of the research process. The original novella, PD model and thesis will each rely significantly on drafting and editing processes. Journalling and editing software, index cards, and careful planning and structures embedded in documents, are expected to be exceptionally helpful for drafting and revision of the research content across all original research products. What you see online may appear quite different in print form and manual editing should be a priority.

Theory criticisms: Drafting and revision of creative or academic work takes time due to "translation" issues. "Translation" processes may be considerable in poetry or highly technical drafting. Increasing subject matter involves significantly more work.

A reliance on drafting and revising, rather than careful forethought, planning and crafting can be a disadvantage in creative writing because its risks oversight and significant rewrites; furthermore, may signify a lack of careful forethought. Notwithstanding this, drafting and revising techniques are vital for adequately preparing and improving all creative writing and communication generally.

Spontaneous grounded theory enabled the researcher to develop the drafting and revising methodology. The theoretical underpinnings otherwise appeared limited. Drafting and revision processes are both common and individualistic and dependant on the knowledge, skill set and focus of the researcher which develops with "practice".

Conclusion: Drafting and revising are indispensible parts of creative writing and academic research and enable quality thought and products to be developed. The researcher anticipates that all original research products will show evidence of all forms of drafting and revising covered in this section.

Method 11: Journalling

Introduction: The differing and nuanced views of journalling methodologies and methods are explored in this section, and are narrowed to the methods applied by the researcher.

Theory and Analysis: Journalling involves documenting thoughts and releasing them, which frees the researcher's cognition to develop existing or new ideas and discover new motivations. Journalling enables the so-called "conscious" and "subconscious" process of the brain to work together consciously to solve problems through freely writing on the topic.

Sigmund Freud developed a limited mythological model of the mind (Journal Psyche 2018), containing the conscious, subconscious and unconscious which do not appear in the brain and all of which can be consciously experienced or noticed under the right conditions. The brain is an organ that connects to every organ and most parts of the body. Nerves are neurons that fill the whole body (Costandi 2017) and are responsible for muscle contractions (Knierim 2020) and your strength (Neuroscience 2017). The brain is highly responsive and responds to pain and attacks. Regardless no "pain" "receptors" appear inside it (Garland 2012; Greenwald 2012) the brain is highly susceptible to harms and reacts to harm as does the body. The whole brain is a very complicated organ and memories are stored in many parts of it (Queensland Brain Institute 2018). Memories are "embodied". Due to competing tasks it can be difficult for the body to hold onto and develop knowledge. The brain is particularly awful at storing knowledge (Venton 2015). Learning strategies come into play that assist people to recall knowledge and images.

Journaling enables the brain to reduce and eradicate worries (Bergland 2017) and declutters cognition (Sprouffske 2021), enabling researchers to address issues, put them to rest and creatively develop new ideas. By decluttering the brain, the learner or researcher is more effective in recording, reflecting on and developing new knowledge. The relaxing of the brain (releasing of brain and body stress) through left/right hand writing techniques enables the body to reveal all the knowledge "trapped" inside including on any subject enabling the free forming and flowing of ideas and their reconceptualising, repacking and re-embodiment, which may not occur otherwise. Journalling enables researchers to generate ideas on paper regarding any topic, enables the brain to eventually release them, prevents writers' or researchers' blocks from occurring, creates space for new ideas to form. Varying degrees of this form of journaling occurs in practice but theoretically anyone can enter into these deeper states of journalling.

There are three reasons to have a journal: to record, reflect on or develop knowledge. The main standard journals covered in this section are creating writing, research and personal orientated. The fourth journal is the researchers own powerful holistic journal.

Creative writing journals: Donovan (2021) notes that creative writing journals can improve health, cognitive functioning, clear thinking, increase self-awareness and problem-solving. Journals facilitate daily writing habits, improve writing skills and technical writing, record project plans and planning underway, are used to refine work and store ideas (Donovan 2021). Furthermore, creative writing journals may be used for recording story antidotes and images for use in current or future creative works, and may develop current works. Paper journals are usually best, but online journalling is another option.

Arendt and Nuru (2017) considered there were five different types of research journals: observation journals or field notes: recorded during data collection methods; methodological journals: written during the data collection process, regarding survey questions or recruiting participants; theoretical journals: focus on constructing, critiquing or revising or expanding theories, and "how to apply theories to other populations, questioning the ontological, epistemological, or axiological assumptions or commitments of theories, how to blend pieces of theories and how to apply theories"; analytical journals: keeps researchers close to the data and during the data analysis stage researchers "make note of recurring findings, emerging themes, and other details"; and personal journals: for addressing personal thoughts and feelings and should not be censored and are part of being a "reflective and reflexive practitioner".

The researcher anticipates the researcher's journalling approach will incorporate all the above journalling approaches into one journal and be embedded with Research-based Practice, and in addition: shall involve the development of academic, formal and informal knowledges and personal thoughts and ideas as they spontaneously occur with the goal to immediately improve upon them. The researcher's journal shall consist of white pages with no lines enabling the spontaneous free-flow of ideas. Journalling in this context has a creative focus. Journalling can be undertaken privately or in public. The creative process of journalling can occur day and night, and does not necessarily require much space. Journalling is a way to commune with oneself and circulating ideas.

The researcher's form of journalling implies empirical observations, reflection and drafting and revising, textual analysis, potentially ideological criticism and critical theory and Research-based Practice influences. The researcher's journal is holistic, fuses and moves

beyond known forms of journalling, expressly includes creative writing, academic and personal types of journalling, hypothetically draws in all art forms, social and "natural" sciences and internal and external knowledges.

The researcher's journalling method implies empirical observations, textual analysis, every theory, method, thought or feeling known to the researcher. This style of journalling draws on embodied knowledge and awareness, and implies Research-based Practice in terms of holistic content and the fusion of knowledges. Spontaneous grounded theory applies to the researcher's journalling method.

Applications: The researcher will use journalling to engage with all research content in the manner described in this section. The "spontaneous eruption of ideas" implied in the researcher's journalling approach is expected to occur without notice during the day and night. Recording materials, therefore, are expected to be left in key locations to ensure all ideas are captured and developed promptly, to allow space for new ideas to form. It is anticipated that the journalling output will be far greater than the research products' total output. Journalling ideas will be transferred into the original research products.

Theory criticisms: Journalling may not always bear fruit or produce small pockets of insight. Journalling can go off-track. Not everyone has the developed the knowledges and skills necessary to undertake the level of journalling anticipated by the researcher. Yet everyone can achieve gains in journalling. Without re-seeing the world through another lens the "status quo" may be reinforced. Major change should be expected through journalling. It is an interesting, fascinating and immersive phenomenon to experience the world through journalling. Journalling requires resources and space to be extensive. Spontaneous grounded

theory enabled the researcher to develop the journalling methodology. The theoretical underpinnings of journalling otherwise appeared limited.

Conclusion: The researcher's journalling method will be vital for developing and improving research outcomes and shall underpin this original research. The researcher's own method of journalling is expected to be intensive and involve entering the "fissures" of reality in order to determine the extent of selfish binaries and the challenges in deconstructing them. Ideas generated from journalling are expected to be extensive.

Conclusion

These methodologies and methods are expected to play profound roles, in the selection, incorporation, analysis, review and revision, original interpretation, and stepwise thorough development of knowledge and project ideas, and the application of interpretative and applied tools: including selected trauma and gender theories' analysis methods, mathematical modelling and applied science fiction crafting. Each method has its own vital role. In the researcher's opinion, perhaps the most influential of these methods will be the research structure, influences of Research-based Practice and journalling which may lead to the other methods. The strengths of the researcher's methods far outweigh their weaknesses. Nevertheless the latter stands as a warning to the researcher to maintain an overarching focus on objectivity. The key products expected from the research processes are an original novella, PD model and thesis, with the novella anticipated to enable the researcher to efficiently examine the effects of a change in society, being the removal of the selfish binaries evident in the PD models and in society and the replacement of them with an original PD model. The divergent transdisciplinary knowledges fused by the researcher in this project will be used to generate an exceptional original scholarly contribution to the literature in multiple disciplinary fields.

There are risks with any method that may apply documented or spontaneously, but risks are greater that data may be missed or not adequately or rigorously addressed without spontaneous reflecting methods. Spontaneous applications of methods can be less proscriptive and more creative in their application. What is surprising is that many of the methods rely on each other and potentially may be fused in a super methodologies and methods process, a finding contributed through Research-based Practice.

Table 3.2: Methodologies and Methods Literature Review Original Research Findings

Method	Methodologies and Methods Literature Review Original Research Findings
Overall	Methods rely on other methods and may be fused in a super methodologies and methods process, a finding contributed through Research-based Practice.
Method 1	What is lacking according to this researcher is a finding that research frameworks are research methods. The researcher finds that intradisciplinary, crossdisciplinary, multidisciplinary, interdisciplinary and transdisciplinary frameworks each limit and guide the knowledges incorporated in research projects, the synergisation of knowledges and ultimately the original knowledges produced. Research frameworks, therefore, are "overarching" research methods. Contrariwise, the researcher finds that intradisciplinary studies may be limited and provide partial solutions.
Method 2	Grounded theory implies levels of textual analysis and empirical observations, as described in previous sections. Equally, textual analysis and empirical observations suggest "spontaneous grounded theory" may occur, an informal and often cognitive process that enables instantaneous and possibly highly workable theory to be developed by the researcher which can be cognitively generated. Furthermore, grounded theory may theoretically interact with other theories (e.g. Marxist theories, ideological criticism) that are embodied in the researcher and apply as automatic lenses: as many cognitive lenses drive human thinking and there is not always a present awareness of them. Reflexive thinking, also another method, is relevant to the stages of grounded theory development.
Method 3	Mathematical models tell stories and engage with narratives. Creative writing modelling processes are similar to mathematical modelling processes. The researcher further notes that geometric patterns may be used to describe words, word groups, phrases, sentences, paragraphs and structures. Creative writing engages with the full complexities of human expression; whereas mathematics has been deliberately limited for reasons beyond abstraction. Mathematical models themselves are moral symbols and are symbolic of deeper hierarchical, ideological and philosophical preferences. No satisfactory overarching mathematical modelling quality framework had been developed previously.
Method 4	The researcher may incorporate elements of Marxism, a standard with science fiction, but will subvert them by deconstructing economic morality and the selfish binaries. The researcher, furthermore, may subvert the science fiction genre through overtly fusing the future with the past, and bring the genre closer into affecting other genres and affecting current consciousnesses and aspirations.
Method 5	Objective criteria can be enmeshed with biases and so can subjective criteria, and evidenced through research choices. The goal of objectivity, however, is fundamental. Textual analysis also implies that connecting research texts in unique ways constitutes original research.
Method 6	Critical theory applies in the arts, humanities, social sciences and law, and mathematics, health sciences and science generally: although to what degree is yet to be assessed. Objective arguments may be made for subjective reasons.
Method 7	Trauma has acute and chronic causes and is linked to Marxist oppression beyond clear nature-orientated non-human related causes or omissions. The physical causes of trauma are often contested in medical interventions and often through the mythical model of the "mind"; which are capitalist attempts to subvert trauma claims. Nevertheless, trauma theory acknowledges external causes of trauma and worsening of trauma and seeks the holistic eradication of trauma.
Method 8	Eradicating binaries in society may support gender theory's non-binary goals.
Method 9	Reflections are a poor substitute for peer feedback and support; may highlight risks but may equally minimise them; assumes problems can be easily corrected. Those who reflect are not always aware of their own strengths and abilities and limitations. Reflection is vital but does not replace mentor feedback.

Method 10	Drafting and revising are fundamental for creative writing and academic success. Writing can occur in "slabs" of communication, involving whole paragraphs or piecemeal, through the careful crafting of individual words, phrases and sentences. "Cognitive" drafting and revising may occur alongside "physical" writing and editing; with both being present or entering and leaving at different times in the writing process. Writing and drafting enables the crucial refinement of ideas for communication to be clearly and effectively transmitted from one person to another. Writing structures may improve writing dramatically.
Method 11	Journalling ideas on paper regarding virtually any topic enables the brain to eventually release them; prevents writers' or researchers' blocks from occurring; creates space for new ideas to form. The researcher's journalling method is holistic and powerful, combines and moves beyond known forms of journalling; expressly includes creative writing, academic and personal types of journalling; hypothetically, draws in all art forms, social and "natural" sciences, and internal and external knowledges. The researcher's journalling method implies empirical observations, textual analysis, every theory, method, thought or feeling known to the researcher. This style of journalling draws on embodied knowledge and awareness, and implies Research-based Practice in terms of holistic content and the fusion of knowledges.

Chapter 4

Results

The original PD model is based on OIs, which are introduced from Table 4.1 and Figure 4.1, and include important narratives. OIs that lead to or away from imprisonment are captured in relevant tables and areas of triangles as negative or positive OIs respectively. Following the original PD model and its variants, the researcher shall introduce the original novella.

<u>Original Prisoner's Dilemma Model</u>

The original PD model is outlined in three OI relevant situations: alleged accomplices, solo offender, and multiple co-offenders' scenarios.

<u>Table 4.1: Two Alleged Co-offenders (Imprisonment highly likely)</u>

Overbearing Influences	Specifics
Incentives	≤ 9 months prison discount (-25%) guilty plea within 4 weeks of first appearance
Law and legal processes	Presumption of innocence, right to silence, lawyer present, telephone call
Conviction prospects (years)	≤ 3 years prison term: [1] year likely; [3]years possible: strong circumstantial evidence e beyond reasonable doubt
Family influences	NA
Housing	Some external government housing; history of homelessness
Reputation	No reputational impact
Outcome	Legal Effect
Early confession	Prison sentences: served concurrently

<u>Figure 4.1: of Table 4.1 OIs</u>

Note: Family influences and reputation damage are neutral OIs for this person; normally are positive OIs.
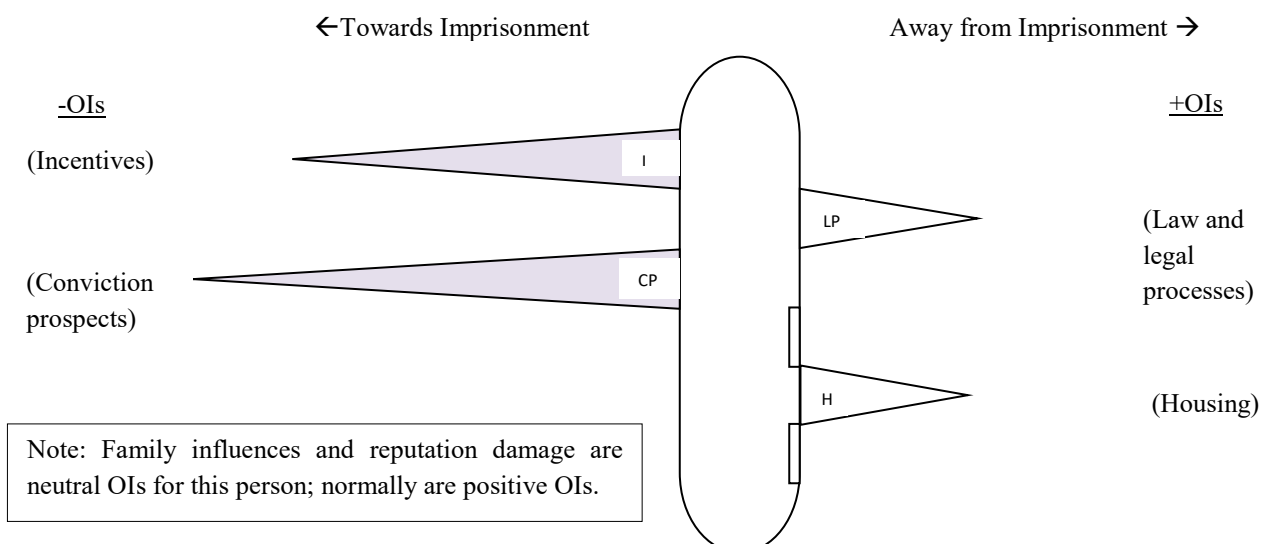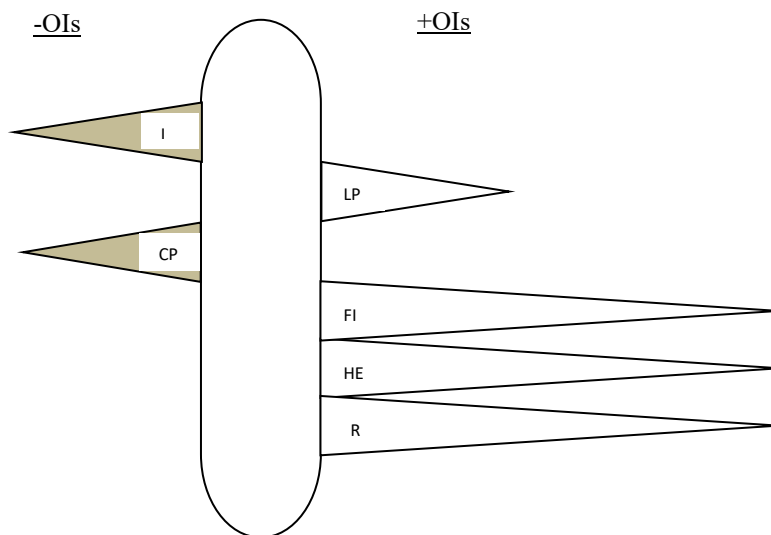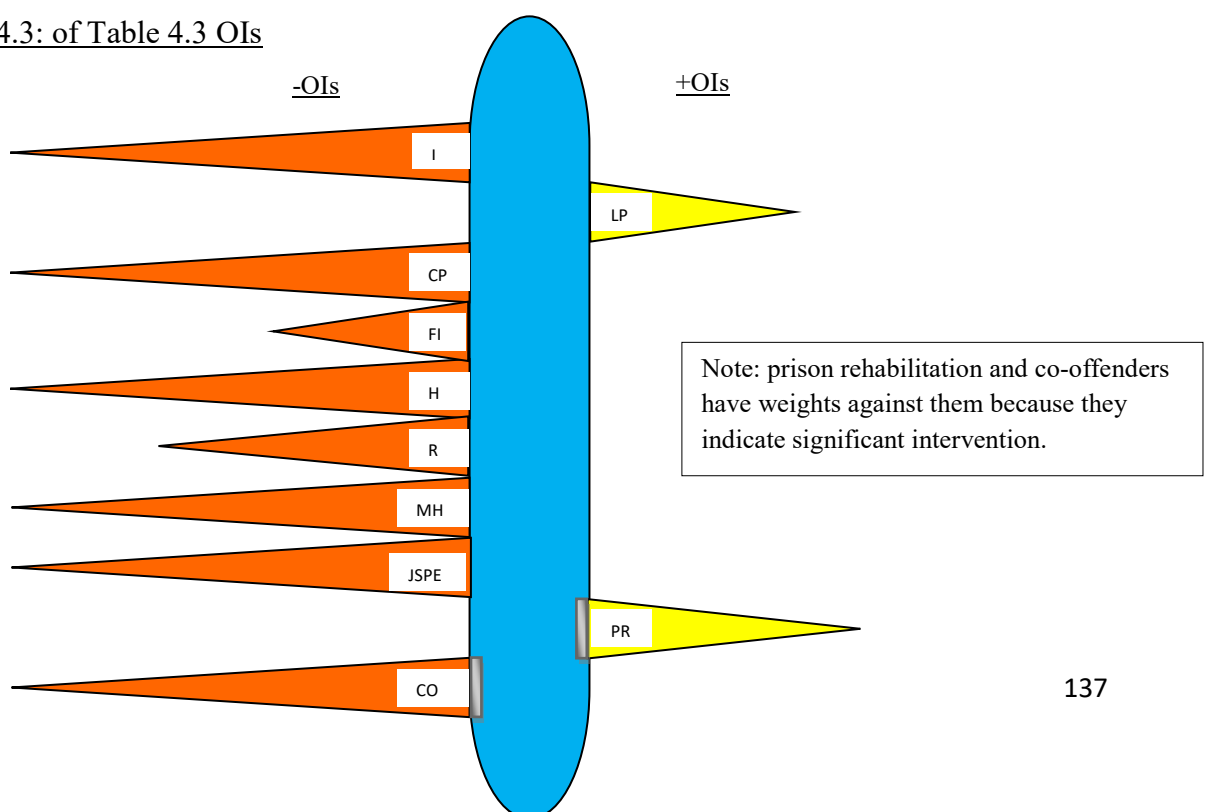
Table 4.2: Solo Alleged Offender (Imprisonment highly unlikely)

Overbearing Influences	Specifics
Incentives	≤ 9 months prison discount (-25%) guilty plea within 4 weeks of first appearance
Law and legal processes	Presumption of innocence, right to silence, lawyer present, telephone call
Conviction prospects (years)	≤ 3 years prison term at worst or none at best: some circumstantial evidence, conviction unlikely
Family influences	Yes
Housing and employment	Yes
Reputation	Good reputation
Outcome	**Legal Effect**
Not guilty plea	Withdrawal of charges or not guilty verdict highly likely

Figure 4.2: of Table 4.2 OIs

Table 4.3: Three Alleged Co-offenders (Imprisonment highly likely)

Overbearing Influences	Specifics
Incentives	≤ 9 months prison discount (-25%) guilty plea within 4 weeks of first appearance
Law and legal processes	Presumption of innocence, right to silence, lawyer present, telephone call
Conviction prospects (years)	≤ 3 years prison term at worst or much less: some circumstantial evidence, conviction likely
Family influences	Poor
Homeless	Yes
Reputation	Poor; manipulated by other co-offenders
Mental health	Poor
Justice system prior exposure	Frequent
Prison rehabilitation	Prospects in minimum security facility; no prospects in a normal prison
Co-offenders	Yes, pressure from many co-offenders
Outcome	Legal Effect
Early confession	Reduced prison sentences; low security rehabilitation prison; internal and external social supports

Figure 4.3: of Table 4.3 OIs

-OIs   +OIs

I
LP
CP
FI
H
R
MH
JSPE
PR
CO

Note: prison rehabilitation and co-offenders have weights against them because they indicate significant intervention.

137

The original PD model factors deeper considerations for alleged offenders, and:

- provides for the significant consideration of the cumulative effects of binary harms as the major causes of alleged offending

- indicates specifically targeted holistic interventions regardless of conviction prospects

- enables greater levels of information to be captured and pleaded by counsel, and over the course of the alleged offender's lifetime

- suggests specific targeted health and education involvement as mitigating factors in early release

- may indicate the extent of policy failure

- is more productive and useful an aid than the PD models

The original research products suggest radically transforming prisons into places of improved healing, of high learning, compassion and personal growth: leading to continued real jobs, stable accommodation, improved health supports, learning opportunities, and "reformed lives". Imagine an "offender" having to design their own interventions. Radical transformation and holistic healing and repair to society are fully possible.

The original PD model specifically fuses the research findings and implies that all of them are capable of being addressed through this models' structure and processes. The model also assumes appropriate responses to this thesis's findings including favourable administrative reforms.

Original Prisoner's Dilemma Model in Formulaic Terms

Original PD model:

$$Ot = OIs(A) - OIs(A)$$

The original PD model assumes that freedoms occur when:

$+OIs(A) \geq -OIs(A)$; and incarceration occurs where $-OIs > +OIs$. Thus crimes are indicatively socially committed and are not individual, they are public responsibilities (through acts, neglect and omissions) even when private. Crimes, indeed, are social phenomena that must be holistically addressed. Everyone in society bears some responsibility for them. The selfish binaries, economic immorality and true "natural offenses" shift a person from "natural healthy free states" and are totally implicated in crime.

The researcher's original novella explores what is freedom and what it is not through a number of key narratives. Furthermore, the original novella explores what is crime through a number of key narratives further developing the thesis content.

Explanation of the Original Prisoner's Dilemma Model in Formulaic Terms

The original PD model in formulaic terms Ot = OIs(A) - OIs(A), is explained further as:

Ot: Outcome (incarceration or freedom).

+OIs: Overbearing influences that promote or are likely to cause freedom are represented as a positive number in the formula.

-OIs: Overbearing influences that imply or are likely causes of incarceration are represented as a negative number in the formula.

(A): Indicates area for a triangle formula; and indicates the summation of all respective +OIs or -OIs areas respectfully, added to the formula.

Thus the positive OIs triangle areas move a person towards holistic freedom, and the minus OIs triangle areas towards prison. This assessment is done through the summation of all the positive and all the negative OIs areas.

Application of the Original Prisoner's Dilemma Formula

The original PD model formula is applied in the following example:

- 4 cm^2 = 4 cm^2 - 8 cm^2. The area of a triangle formula is ½ (base x height) and is measured in square units. Overall, the result of -4 cm^2 is a gross result of imprisonment. The original PD model assumes there is strong evidence for conviction and incentives for an early confession (as -OIs); and legal representation and interim housing cannot offset it (as +OIs).
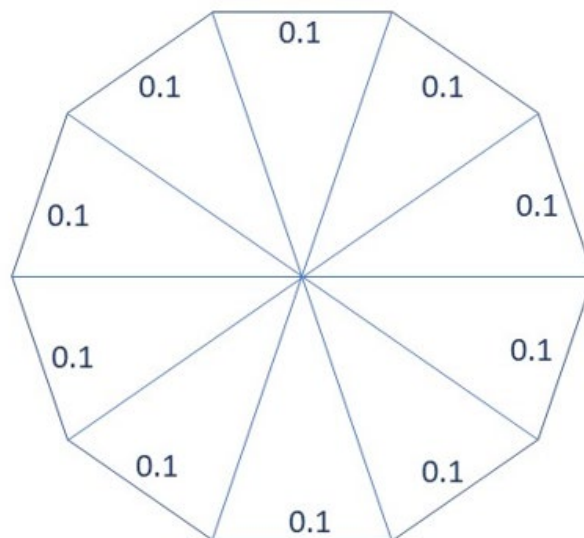
Figure 4.4: Application of the Original PD Model's Formula
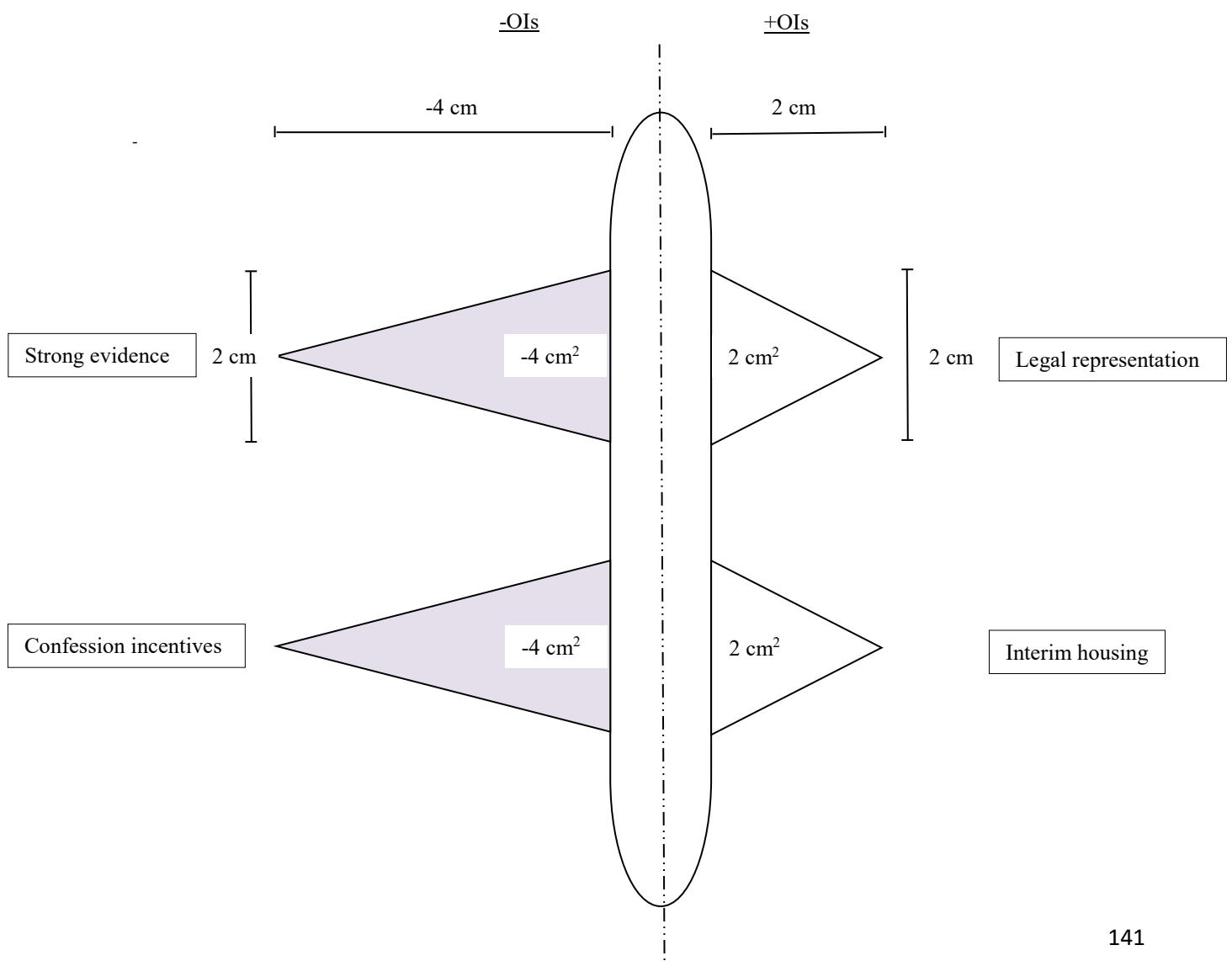
Possible Future Directions for the Original PD Model

The researcher considers that the original PD model geometry can be represented as an n-sided polygon, an octagon, divided into OIs of an initial equal weight and higher mathematics may apply.

Figure 4.5: Original PD model Octagon Version with "Non-defined" Weighted Overbearing Influence Segments

This octagon version of the original PD model could show shifting weights as suggested in the following figure, and could be assessed using probability, calculus or vortex mathematics if designed to factor complex changes.

Figure 4.5: Original PD model Octagon Version Horizontal View Displaying the Strong Influences and Shifting of One or More Overbearing Influences
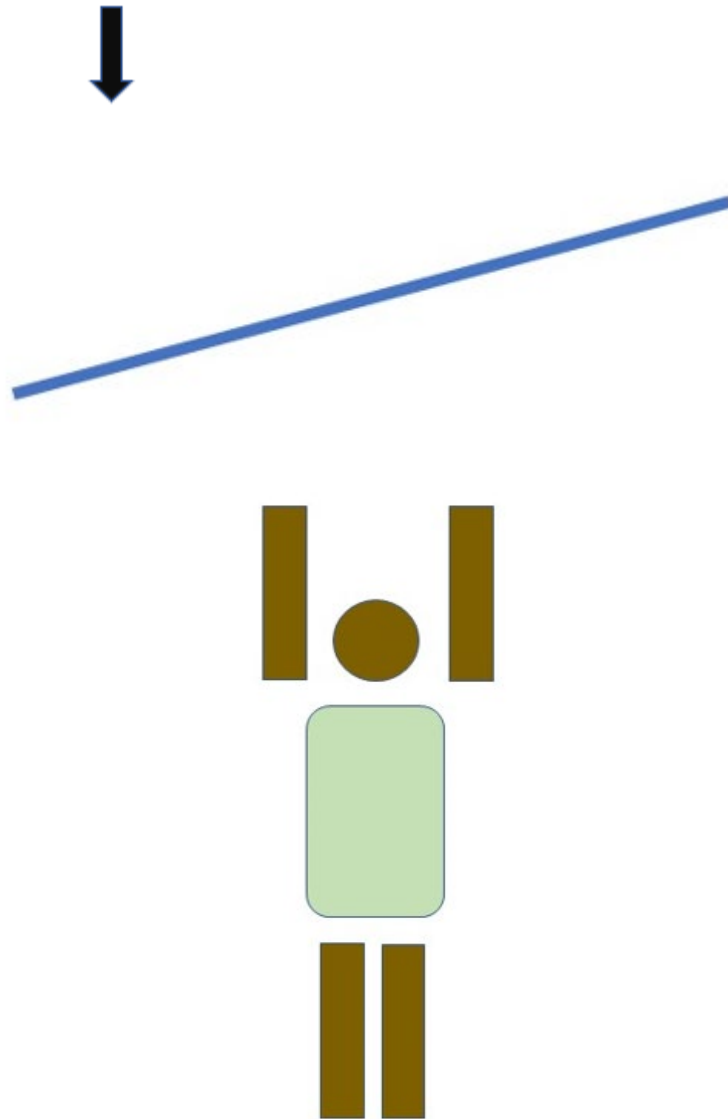
The following novella is embargoed but may be purchased from local book stores.

Chapter 5

<div align="center">**Discussion**</div>

All the research products constitute original research and have research results that are

discussed in this section. The PD models are found to contain gross binaries and are causing

gross binary harms to be committed to those already vulnerable and traumatised individuals

in legal processes. The PD models are: extremely detrimental; are grossly failing against

broader economic principles; are linked to younger persons making false confessions and

suffering fatal retributions; cause massive workforce participation harms; limit economic

growth; motivate the disobeyance of crucial legal safeguards; causing physical and

psychological trauma; are responsible for increasing crime and "reward" crime; motivate

traumatic interrogations; cause civil unrest; and ignore collectivist concerns that would

reduce crime. There are two selfish parties found to exist in the PD models: law enforcement

seeking a conviction as the expense of legal safeguards and interrogatees who are forced into

a disturbing highstakes game. Imprisonment has been shown to be non-deterrent while being

a place of violence, trauma and the absence of law; and an example of economic violence.

Interrogations are implicated in affecting prisoners' views on the strength of evidence in

confessions and legal representation results in no confession mainly. Trauma is found to be

embodied and causing reactions that are criminal.

The researcher's novella examines a world moving from the PD models and the selfish

binary, to a world without the selfish binary and with an original PD model. The researcher

enmeshes the themes, theories and methods from the literature reviews and expands upon

them in the original novella throughout all story features including plot, environment and characters' arcs. This implicates Research-based Practice's influence in the creative work. The writing is highly figurative in parts. The researcher's novella subverts normal science fiction consequential themes by examining binaries and positive economic morality. The researcher finds that a non-binary world is happier and suffering is virtually non-existent and does so efficiently in the broad context of the cultural world inhabited by the characters. Gender non-binaries are shown to be non-consequential. The researcher's appendices studies are reflected in the novella. The researcher effective links the external and internal worlds in the protagonist's thoughts and actions. The original PD model is reflected in the novella through changing OIs that naturally change in the world and are represented in the novella's changing narrative structures. The novella's structure itself is influenced by this thesis structure. Economic violence is explored thoroughly in the novella and appears in places with and without laws. The effect of workplace interrogations are shown to be devastating for all workplace parties. Trauma and marketing are both shown to affect a person's thoughts and responses and diminish human control.

Australian and international Creative Writing researchers are shown to reject PD models' assumptions with regards to legal processes and question whether laws are too blunt and too late and whether truth and justice are aligned. Furthermore, the novels studied suggest the law comes in too late and not enough is done to help persons before crimes are committed. The researcher finds that all forms of government become unstuck by the selfish binary which is drawing countries closer together. The researcher further finds that eradicating selfish binaries and "positive" economic morality focusing on non-harming humans can reverse this trend. Creative Writing research is shown to be an excellent "text-type" for efficiently examining the broader social implications of all research. Research-based Practice, built upon

Aristotle Knowledge Development Theory and Practice Research Theory, is shown to be an excellent research method and particularly for incorporating divergent knowledges and fusing them. It enabled the spontaneous development of knowledges across the research project and without limitations revealing all research findings. Journalling itself was fundamental to the development of all content across all original cultural products.

Transdisciplinary frameworks are proven to assist researchers to address complex real world problems, find solutions and warrant immediate implementation consideration. Transdisciplinary research enables existing research to be examined and "tested" from multiple perspectives. Research frameworks are shown to be research methods. Research methods are shown to have similarities and innate reliance on other methods, which may be ignored in research to indicate objectivity as opposed to the researchers suggested "goal" of objectivity. The researcher finds that all research is subjective (e.g. evidenced through choice of subject and methods used) and may involve power interplays. Knowledge is shown to be "embodied". The researcher further suggests that binary mythologies and harms across society must be identified and eradicated.

Limitations of this Research

The researcher's study is a holistic study that incorporates divergent knowledges to solve binary problems and harms that the researcher found evident in and stemming from the PD models. A more limited study may produce conflicting results. A study longer than 12 months may incorporate more subject matter and include additional findings.

Future Research

Future Creative Writing research may include: creative products written closer to the non-binary ideal; rewriting binary novels in their non-binary form and rethinking them; developing an historical chronology of binary harms in a field; developing binary criticism in a discipline; examining non-binary influences in various areas of society; theorising non-binary effects in binary settings.

Chapter 6

Conclusion

The PD models are found to be motivating binary harms and appear to be motivating disruptions to society. The researcher's original PD model is based on positive economic morality and collectivist thought and can be used to eradicate or reduce crime. The researcher presents a new cultural novella written towards a non-binary ideal and finds the non-binary world and society caters for humans rather than work against them. The researcher explores binary harms and economic violence in places with laws and the absence of laws across society including in the workplace.

The researcher finds that the prison model should be rejected and that caring for humans and animates should be given the highest priority. The harms prisoners face go well beyond the "sentences" and occur in many levels of the criminal justice system. Notably, economic and related social harms are inflicted on these individuals that change their lives and eradicate "choices". The researcher shows choice is socially constructed and that free will is clearly a myth. Furthermore, that binary mythologies once removed enable true freedoms to occur. The researcher finds that Foucault's (1977) notion of circulating ideas can be affected by powerful mythologisers.

Creative Writing research is shown to be an excellent text-type for efficiently examining the broader social implications of all research. Research-based Practice, built upon the Aristotle Knowledge Development Theory and Practice Research Theory, is shown to be an excellent research method and particularly for incorporating divergent knowledges and fusing them.

This research further highlights that binaries cause major civil unrest and should be identified, deconstructed and eradicated.

Researchers should be vigilant and consistently address binary harms in society. Binaries are significant in circulating knowledge and should be contested. In the researcher's view, it is up to all researchers to find binaries in knowledge (e.g. in narratives, actions and objects) and dismantle them for humans and animates' sakes. Furthermore, it is the researcher's strong view that no amelioration, minimisation or distortion of the narratives of economic violence will assist "prisoners" short of the full interventions expressed or implied across the original research products. "Passive" violence remains overt violence and it should be deconstructed. Violence in society is always embodied. Ending violence will require full social and cultural support.

Chapter 7

Appendices

<u>Introduction</u>

These appendices contain knowledge not directly relevant to main arguments in this original thesis, but nonetheless contain essential information interwoven or applied to varying degrees, expressly or impliedly, throughout all original research products. The appendices include sections where the researcher develops: Aristotle Knowledge Development Theory, Practice Research Theory and Research-based Practice; researcher's Literature Review Structural Method and Inductive Research Method; a Creative Writing practice research diagram incorporating Research-based Practice; Mathematical Modelling Quality Framework; and details science fiction and science experiments; knowledge and sensory findings; general journalling studies; and fiction and research analysis forms. The appendices further evidence the researcher addressing binaries in various forms across society.

There is no limit to what can be included in appendices, but appendices should include information that supports research analyses (including repetitive or lengthy information), or validates conclusions, or pursues a relevant research-related point (University of Wollongong 2020).

Appendix 1

<u>Introduction</u>

The researcher in this section develops the "Research-based Practice" research and literature review method, for the purpose of incorporating highly divergent knowledges in this transdisciplinary study necessary for addressing the PD models (creative writing narratives, economics and mathematics, philosophy and gender studies, law and legal processes, psychology, empirical studies and field experiments) through original research: as identified in the transdisciplinary literature review. Furthermore, Research-based Practice will be fundamental in linking and fusing seemingly unrelated multiple disciplinary knowledges to the PD models for deconstructing them. Existing knowledge is also formally linked to the PD models in significant ways across the original research products.

Aristotle Knowledge Development Theory will first be developed and shall function as an overarching theory for all knowledge development. Thus, Aristotle Knowledge Development Theory will necessarily form a component of Practice Research Theory which will subsequently be developed in this section: extends Aristotle Knowledge Development Theory in key ways. Practice Research Theory is developed from Creative Writing artform knowledges. Research-based Practice is Practice Research Theory as developed by the researcher into a highly portable research and literature review method.

Grounded theory is the method used to produce the two theories. The approach adopted is explained in the methodologies and methods literature review. The researcher allows for the use of spontaneous grounded theory.

Explanation for the Development of Aristotle Knowledge Development Theory

Schryen, Wagner and Benlian (2015) present an excellent epistemological model of information systems literature reviews in their paper: having examining the extent of available literatures, they find after extensive research for and analysis of available literatures, that to the best of their knowledge "no epistemological model of literature reviews ... has been suggested so far" (Schryen, Wagner & Benlian 2015, p. 2). According to Schryen, Wagner and Benlian (2015): "knowledge" is defined as a justified true belief; begins with a model depicting the interactions of two types of knowledges: tacit (subjective, cognitive and experiential knowledge) and explicit knowledge (published knowledge) with domain (knowledge from a field) and domain meta knowledge (knowledge about knowledge); identifying their relationships with multiple research processes and products in the context of confirmed information systems literature reviews findings: with regards to synthesis, adoption of a new perspective, theory building, theory testing, identification of research gaps, and provision of research agenda. Beyond the information systems, literature reviews may also involve the fresh or existent classification of literatures: in the latter case there may not be original "theory" building, and in either case, no "testing" may occur in the dissertation itself. Elements of spontaneous grounded theory, as described in the grounded theory section of the researcher's methodologies and methods literature review, appear implied in Schryen, Wagner and Benlian's (2015) identification of literature review practices and processes identification. Notwithstanding this, the information systems epistemological model of literature reviews designed by the authors appears to have wide applications across multiple disciplinary contexts.

In the context of Creative Writing research, the researcher's study suggests that formal and informal research is vitally important and comes to bear on research processes that implicate subjectivity, as this researcher confirms in this original thesis applies to all research. Exegeses may evidence literature review methods' outcomes in explicit and implicit ways. Implicit knowledge (knowledge from applying explicit knowledge) appears as a factor in this research. Additional gaps in "literature reviews" knowledge may apply in: methodological and methods literature reviews, especially in terms of identifying and modifying methods. While people use knowledge to achieve goals in literature reviews with existent knowledges, an overarching framework for knowledge development as a whole has not been developed: this is implicit in Schryen, Wagner and Benlian's (2015) findings that no epistemological model of literature reviews had been conducted prior to their paper; also confirmed by this researcher's search of available literature. Furthermore, "literature" according to the researcher's findings in the textual analysis section of the methodologies and methods literature review, would be classified as a "text" or anything (McKee 2003). Narrative or otherwise, nothing of substance has been written for an overarching framework for knowledge development.

Epistemology has an impressive history but this branch of knowledge still appears limited; concerns the nature of knowledge (Encyclopedia Britannica 2022a). "Expressions such as know them, know that, know how, know where, know why, and know whether, for example, have been explored in detail." (Encyclopedia Britannica 2022a) A number of propositional problems are raised in epistemology. The Platonic theory of knowledge contains two parts: an investigation into the nature of unchanging objects and a discussion of knowing these objects through reason (Encyclopedia Britannica 2022a). Aristotle's view is that science consists of a set of first principles, that are necessarily true and knowable directly, and a set of truths,

logically derivable from and may be causally explained by principles. Historically, faith and science questions are of importance in the field. Michel Foucault (1926–84) wrote extensive historical studies, notably *The Archaeology of Knowledge* (Foucault 2016; first published 1969) to demonstrate that all concepts are historically conditioned and that important ones serve the political function of the controlling elite. Jacques Derrida (1930–2004) claimed dualisms are value-laden and indefensible; deconstruction was used to show that philosophy was incoherent because whatever could be said about one term of the dichotomy could be said of the other. The researcher questions there must be a general theory of knowledge that is more abstract, concrete and "objective" perhaps scientific: the role of the researcher shall be to unearth this theory.

The "gap" of a general theory of knowledge development will be filled by the researcher in this section using grounded theory, as explained earlier. An overarching theory of this kind is expected to apply to and underpin all types of knowledge development with a logical or scientific basis. The researcher considers that such a theory should be in existence for thousands of years, and thus will refer to Aristotle's views as point of reference due to that scholar's classifications and apparent deliberate efforts to develop a relevant field of knowledge development. The researcher also assumes that what applies to one field should be capable of being applied in other fields of "research". Aristotle's works in this field have unfortunately largely been ignored. This knowledge will aid the researcher in developing Aristotle Knowledge Development Theory and Practice Research Theory and will be "transformed" into a portable research method for all researchers in Research-based Practice. Research-based Practice will assist the researcher to: a) include divergent knowledges; and b) fuse knowledge formally or spontaneously. This method will allow the researcher to connect seemingly unrelated knowledges together and necessarily for the purposes of

examining the PD models, deconstructing them, deconstructing selfish binaries generally and facilitating findings and recommendations for change. Without "reinventing the wheel" (Schryen, Wagner & Benlian 2015), the researcher will efficiently develop the necessary theories. It is expected the theories will be sufficiently developed and applied by the researcher through Research-based Practice which shall have wide general applicability. Aristotle Knowledge Development Theory shall underlie Practice Research Theory's knowledge development and creativity roles.

The Development, Detail and Application of Aristotle Knowledge Development Theory

As stated, the grounded theory methods used in developing Aristotle Knowledge Development Theory are stipulated in the grounded theory section of the methodological and methods literature review, and were derived from two key Aristotle texts (Aristotle 350BCa; Aristotle 350BCb). The original theory has been developed. The application and results from the application of the researcher's grounded theory methodologies and methods are contained in Appendix 1.1.

Aristotle Knowledge Development Theory: begins with a state of pre-existing knowledge existing (I have included the relevant reference where appropriate: Aristotle 350BCa), with the inference there was never a state of being without it. Knowledge can be contained or found in many different forms (e.g. texts, narratives, objects, and artefacts: Aristotle 350BCa). For new knowledge to be developed, pre-existing knowledge must be discovered (Aristotle 350BCa). New knowledge development occurs through the synthesising of pre-existing knowledge (e.g. through a literature review method) into new knowledge (Aristotle 350BCa). This is particularly true as new insights emerge. As new knowledge emerges, it is natural to test that knowledge to varying degrees, which may also develop the knowledge (Aristotle 350BCa).

Questioning what we know and observe is a fundamental part of the knowledge development process (e.g. questions concerning cause and effect; Aristotle 350BCb). New knowledge can be discovered by simple observation and awareness, or by applying complex methods, processes and practices to a section of a field of knowledge (Aristotle 350BCa; Aristotle 350BCb). Knowledge widely shared can be either popularly accepted or rejected, but is not a

criterion of truth (Aristotle 350BCa). Knowledge development is an active process, involving thought and or active cognition and or practices (Aristotle 350BCa).

Implications: The grounded theory derivation of Aristotle Knowledge Development Theory is expected to apply to the development of all knowledge, at any point in the human's knowledge development journey. Furthermore, it should apply to the development of knowledge in all the research products; and they will be formally incorporated into Practice Research Theory and its portable form Research-based Practice.

Explanation for the Development of Practice Research Theory

The researcher wishes to develop a model of Creative Writing creativity and general arts creativity, and make it portable through the Research-based Practice method. Creativity literature in Creative Writing and arts currently focuses on sources and types of creativity, but there is no highly practical theoretical-method of creativity. Darwish (2018) notes Plato's view of creativity pertained to mystical inspiration and divine revelation, and seemingly occurred in a "flash"; romantics likewise shared the divine view, but factored genius and dreams. Social theorists consider art is a social phenomenon and relational. Takolander (2014) finds the romantic view of inspiration alive and well, and predominantly masculine; contrariwise, Dissanayake's theory is emotion-based, grounded in mutuality, feminism and audience; similarly, Damasio's theory concerns the emotion-brain-"mind" biological model, which extends beyond the Jungian Freudian "unconscious" model of creativity. The "gap" the researcher will fill, is to develop a general practical model of creativity using grounded theory processes as specified in the methodologies and methods literature review. The researcher envisages the original theoretical-method of creativity could be applied in any disciplinary research contexts and non-disciplinary contexts.

The Development, Detail and Application of Practice Research Theory

As stated, the grounded theory methodology and methods used for developing Practice Research Theory are stipulated in the grounded theory section of the methodological and methods literature review. The original theory has been developed. The application and results from the application of the researcher's grounded theory methodologies and methods are attached in Appendix 1.2. The categorisation of Practice Research Theory, as outlined below, are supported by the following research articles and were identified by the researcher from the researcher's knowledge of creativity in creative writing practices (theory applied): Takolander 2014; Dawson 2008; Graham 2009; Brien & Mcallister 2016; Krauth 2011; and Exploring the Arts Foundation 2021.

Practice Research Theory: extends beyond Aristotle Knowledge Theory or modifies it in key ways. First, all of Aristotle Knowledge Development Theory applies to the following Practice Research Theory theories (I have included the relevant reference where appropriate: refer to the development of Aristotle Knowledge Development Theory in this thesis; Aristotle 350BCa; Aristotle 350BCb; the subcategory theory level which occurs earlier than the final broad theoretical level, is more practical and useful in defining and identifying Practice Research Theory). Second, the theory considers that all pre-existing knowledge is both (a) creative-sensory and (b) scientific-logical phenomena (Takolander 2014; Graham 2009; Dawson 2008). Third, any knowledge, including from any discipline, can be applied and or synergised at any stage, process, point, in any section, place, object, material, space, time-reference relevant to the researcher: there is no unnecessary confining or exclusion of necessary knowledge (Takolander 2014; Krauth 2011; Graham 2009; Exploring the Arts Foundation 2021). Fourth, the researcher determines what is necessary knowledge within the

bounds of the research project (Krauth 2011; Exploring the Arts Foundation 2021). Fifth, a goal of the practitioner is to synergise knowledge on at least one topic in a unique way to produce new meaningful insights and knowledge (Krauth 2011; Exploring the Arts Foundation 2021). Sixth, disciplinary or artificial boundaries give way to the integration of all relevant knowledges, methods, processes and practices as required (Krauth 2011; Graham 2009; Exploring the Arts Foundation 2021; Dawson 2008). Seventh, new knowledge discovered during the research process may instantly be treated as a form of pre-existing knowledge to be explored and or synergised during research processes (Krauth 2011; Graham 2009). Eighth, disciplinary knowledges, methods, processes and practices may be combined and or integrated as required (Brien & Mcallister 2016; Krauth 2011; Graham 2009; Dawson 2008). Ninth, Practice Research Theory often involves the researcher experimenting with or making comparatively large exploratory and or synergistic creative leaps as pre-existing knowledge is synthesised into new knowledge (Brien & Mcallister 2016; Krauth 2011; Graham 2009; Exploring the Arts Foundation 2021; Dawson 2008).

The third criterion implies subjectivity on the part of the researcher, but need not compromise the "objectivity goal". This ninth criterion suggests the art of creativity involves the drawing of comparisons between seemingly unconnected knowledges. Practice Research Theory presents as a theoretical and applied creativity research product.

Explanation of the Development, Detail and Application of Research-based Practice

The explanation for the development of Research-based Practice was raised earlier. Research-based Practice is simply Practice Research Theory developed into a theoretical and applied portable research and literature review method. Thus the power of creative practices as

theorised may be used by researchers from any discipline, within any research framework, in conjunction with any other methodology or method, or used on its own.

Research-based Practice is a highly creative: a) research method; and b) literature review method. The researcher has applied it across all the original research products by using its capacities to: a) incorporate any knowledge; and b) fuse knowledge. The use of this new method is also implicated in the development and functioning of this Creative Writing hybrid thesis structure.

Conclusion

The new Research-based Practice research and literature review method is a transportable form of Practice Research Theory, enabling it to be transported into any research process and framework. Practice Research Theory was developed using Aristotle Knowledge Development Theory as its basis and using relevant Practice Research Theory, drawn from the researcher's identified grounded theory induction methods. Aristotle Knowledge Development Theory was developed using the researcher's identified grounded theory inductive methods.

The Research-based Practice research and literature review method has been fundamental to the development and fusion of all knowledge in the researcher's project. This has enabled the relevant divergent transdisciplinary knowledges to be appropriately incorporated and fused in the project as required. Furthermore, Research-based Practice was used in the creative spontaneous development of newly formed and existing knowledge across the entire project.

The Grounded Theory Development of Aristotle Knowledge Development Theory

In this section, the researcher develops Aristotle's Knowledge Theory using a modified grounded theory approach, as described in the methodological and methods section. The body of knowledge outlined in key referenced Aristotle texts and selections, are synthesised into general theoretical principles.

Textual information from which observations are made are quoted. From this point, four phases of theory development occurs, with each phase's knowledge shaping towards the final theory. The grounded theory development process is presented from the ground up.

The Grounded Theory Development of Aristotle's Knowledge Development Theory

Theory 1

Phase 4

Theory 1: Knowledge development begins with pre-existing knowledge.

Phase 3

Knowledge development proceeds from pre-existing knowledge.

Phase 2

Instruction begins with pre-existing knowledge.

Old knowledge is used to generate new knowledge.

Phase 1

All instruction given or received by way of argument <mark>proceeds from pre-existent knowledge</mark>. This becomes evident upon a survey of all the species of such instruction. The mathematical sciences and all other speculative disciplines are acquired in this way, and so are the two forms of dialectical reasoning, syllogistic and inductive; <mark>for each of these latter make use of old knowledge to impart new</mark>, the syllogism assuming an audience that accepts its premises, induction exhibiting the universal as implicit in the clearly known particular. Again, the persuasion exerted by rhetorical arguments is in principle the same, since they use either example, a kind of induction, or enthymeme, a form of syllogism.

(Aristotle 350BCa).

<u>Theory 2</u>

Phase 4

Theory 2: Knowledge exists in objects.

Phase 3

Knowledge can be contained or found in many different forms (e.g. texts, narratives, objects, and artefacts).

Phase 2

Knowledge can be found in objects.

Phase 1

> Thus, we assume that every predicate can be either truly affirmed or truly denied of any subject, and that 'triangle' means so and so; as regards 'unit' we have to make the double assumption of the meaning of the word and the existence of the thing. The reason is that these several objects are not equally obvious to us. … ==For example, the student knew beforehand that the angles of every triangle are equal to two right angles; but it was only at the actual moment at which he was being led on to recognize this as true in the instance before him that he came to know 'this figure inscribed in the semicircle' to be a triangle.==
>
> (Aristotle 350BCa)

Theory 3

Phase 4

Theory 3: New knowledge is formed from pre-existing knowledge.

Phase 3

For new knowledge to be developed, pre-existing knowledge must be discovered.

Phase 2

New knowledge can be generated from pre-existing knowledge assumptions.

New knowledge can be generated from existing comprehended terms.

New knowledge can be generated from pre-existing universal knowledge.

Phase 1

The pre-existent knowledge required is of two kinds. In some cases admission of the fact must be assumed, in others comprehension of the meaning of the term used, and sometimes both assumptions are essential. Thus, we assume that every predicate can be either truly affirmed or truly denied of any subject, and that 'triangle' means so and so; as regards 'unit' we have to make the double assumption of the meaning of the word and the existence of the thing. The reason is that these several objects are not equally obvious to us. Recognition of a truth may in some cases contain as factors both previous knowledge and also knowledge acquired simultaneously with that recognition-knowledge, this latter, of the particulars actually falling under the universal and therein already virtually known. For example, the student knew beforehand that the angles of every triangle are equal to two right angles; but it was only at the actual moment at which he was being led on to recognize this as true in the instance before him that he came to know 'this figure inscribed in the semicircle' to be a triangle. For some things (viz. the singulars finally reached which are not predicable of anything else as subject) are only learnt in this way, i.e. there is here no recognition through a middle of a minor term as subject to a major. Before he was led on to recognition or before he actually drew a conclusion, we should perhaps say that in a manner he knew, in a manner not.

(Aristotle 350BCa, Part 1)

Theory 4

Phase 4

Theory 4: New knowledge is synthesised pre-existing knowledge.

Phase 3

New knowledge development occurs through the synthesising of pre-existing knowledge into new knowledge.

Phase 2

Pre-existing knowledge is used for developing new knowledge.

Phase 1

>All instruction given or received by way of argument proceeds from pre-existent knowledge. This becomes evident upon a survey of all the species of such instruction. The mathematical sciences and all other speculative disciplines are acquired in this way, and so are the two forms of dialectical reasoning, syllogistic and inductive; for each of these latter make use of old knowledge to impart new, the syllogism assuming an audience that accepts its premises, induction exhibiting the universal as implicit in the clearly known particular. Again, the persuasion exerted by rhetorical arguments is in principle the same, since they use either example, a kind of induction, or enthymeme, a form of syllogism.

>(Aristotle 350BCa)

<u>Theory 5</u>

Phase 4

Theory 5: New knowledge is tested.

Phase 3

As new knowledge emerges, it is natural to test that knowledge to varying degrees, which may also develop the knowledge.

Phase 2

New knowledge is developed through experimentation with knowledge in different ways and contexts.

Phase 1

> For example, the student knew beforehand that the angles of every triangle are equal to two right angles; but it was only at the actual moment at which he was being led on to recognize this as true in the instance before him that he came to know 'this figure inscribed in the semicircle' to be a triangle.
>
> (Aristotle 350BCa)

<u>Theory 6</u>

Phase 4

Theory 6: Knowledge development involves questioning what we know and observe.

Phase 3

Questioning what we know and observe is a fundamental part of the knowledge development process - e.g. questions concerning cause and effect.

Phase 2

To know the essential nature of a thing, we must question and know the cause of its existence.

Phase 1

Now to know its essential nature is, as we said, the same as to know the cause of a thing's existence, and the proof of this depends on the fact that a thing must have a cause. Moreover, this cause is either identical with the essential nature of the thing or distinct from it; and if its cause is distinct from it, the essential nature of the thing is either demonstrable or indemonstrable.

(Aristotle 350BCb)

<u>Theory 7</u>

Phase 4

Theory 7: New knowledge can be formed through observation and awareness, or by applying complex methods, processes and or practices.

Phase 3

New knowledge can be discovered by simple observation and awareness, or by applying complex methods, processes and or practices to a section of a field of knowledge.

Phase 2

New knowledge stems from pre-existing knowledge.

New knowledge can be simultaneously derived.

New knowledge can be acquired through different contexts and processes.

New knowledge can be acquired through complex processes.

Phase 1

The pre-existent knowledge required is of two kinds. In some cases admission of the fact must be assumed, in others comprehension of the meaning of the term used, and sometimes both assumptions are essential. Thus, we assume that every predicate can be either truly affirmed or truly denied of any subject, and that 'triangle' means so and so; as regards 'unit' we have to make the double assumption of the meaning of the word and the existence of the thing. The reason is that these several objects are not

equally obvious to us. Recognition of a truth may in some cases contain as factors both previous knowledge and also knowledge acquired simultaneously with that recognition-knowledge, this latter, of the particulars actually falling under the universal and therein already virtually known. For example, the student knew beforehand that the angles of every triangle are equal to two right angles; but it was only at the actual moment at which he was being led on to recognize this as true in the instance before him that he came to know 'this figure inscribed in the semicircle' to be a triangle. For some things (viz. the singulars finally reached which are not predicable of anything else as subject) are only learnt in this way, i.e. there is here no recognition through a middle of a minor term as subject to a major. Before he was led on to recognition or before he actually drew a conclusion, we should perhaps say that in a

manner he knew, in a manner not.

(Aristotle 350BCa)

Theory 8

Phase 4

Theory 8: The more widely knowledge is shared the more widely it is accepted and or rejected, but is not a criterion of truth.

Phase 3

Knowledge widely shared can be either popularly accepted or rejected, but is not a criterion of truth.

323

Phase 2

Knowledge can be popularly accepted, but this is not a criterion of truth.

Knowledge can be popularly rejected, but this is not a criterion of truth.

Knowledge can be widely shared.

Phase 1

This shows how naive it is to suppose one's basic truths rightly chosen if one starts with a proposition which is (1) popularly accepted and (2) true, such as the sophists' assumption that to know is the same as to possess knowledge. For (1) popular acceptance or rejection is no criterion of a basic truth, which can only be the primary law of the genus constituting the subject matter of the demonstration; and (2) not all truth is 'appropriate'.

(Aristotle 350BCa)

Theory 9

Phase 4

Theory 9: Knowledge development is an active process.

Phases 3

Knowledge development is an active process, involving thought and or active cognition and or practices.

Phase 2

Developing new knowledge is an active cognitive process.

Developing new knowledge is an active practical process.

Phase 1

<mark>All instruction given or received by way of argument proceeds from pre-existent knowledge</mark>. This becomes evident upon a survey of all the species of such instruction. <mark>The mathematical sciences and all other speculative disciplines are acquired in this way, and so are the two forms of dialectical reasoning, syllogistic and inductive; for each of these latter make use of old knowledge to impart new, the syllogism assuming an audience that accepts its premises, induction exhibiting the universal as implicit in the clearly known particular. Again, the persuasion exerted by rhetorical arguments is in principle the same, since they use either example, a kind of induction, or enthymeme, a form of syllogism.</mark>

(Aristotle 350BCa)

Table 7.1: List of Aristotle Knowledge Development Theory Theories

Theory #	Aristotle Knowledge Development Theory
1	Knowledge development begins with pre-existing knowledge
2	Knowledge exists in objects
3	New knowledge is formed from pre-existing knowledge
4	New knowledge is synthesised pre-existing knowledge
5	New knowledge is tested
6	Knowledge development involves questioning what we know and observe
7	New knowledge can be formed through observation and awareness, or by applying complex methods, processes and or practices
8	The more widely knowledge is shared the more widely it is accepted and or rejected, but is not a criterion of truth
9	Knowledge development is an active process

Appendix 1.2

The Grounded Theory Development of Practice Research Theory

In this section, the researcher develops Practice Research Theory using a modified grounded theory approach, as described in the methodological and methods section. The body of knowledge outlined in key referenced texts and selections, are synthesised into general theoretical principles.

Textual information from which observations are made are quoted. From this point, four phases of theory development occurs, with each phase knowledge is shaped towards the final theory. The grounded theory development process is presented from the ground up.

Theory 1

Phase 4

Theory 1: All of Aristotle Knowledge Development Theory applies to the following Practice Research Theory theories.

Phases 1, 2 and 3: refer to the development of Aristotle Knowledge Development Theory in this thesis; Aristotle 350BCa; Aristotle 350BCb.

Theory 2

Phase 4

Theory 2: All pre-existing knowledge is both creative-sensory and scientific-logical phenomena.

Phase 3

Knowing is creative-sensory and impliedly scientific-logical.

Knowing through science and art is implicated in creative practice.

Creative processes draw on the social sciences and sciences phenomena.

Phase 2

Knowing, feeling, creativity and the body, according to scientists, are implicated in creative practice.

Creative art involves individuality, culture, society, action learning, economic application, critical-flections.

Creative processes factor a range of social sciences and sciences information.

Phase 1

Takolander 2014

[T]he work of the sociobiologist Ellen Dissanayake and of the neuroscientist Antonio Damasio invite new ways of thinking about the role of the feeling body, femininity and mutuality in creative practice.

(Takolander 2014)

Graham 2009

From these theses, a six-step strategy was devised involving creative space embodying individuality, cultural heritage and social interaction: action learning embodying cultural heritage, economic application and social interaction; critical-creative assessments embodying individuality, cultural heritage, economic application and social interaction … .

(Graham 2009)

Dawson 2008

The widespread academic critique of traditional categories such as 'literature', 'creativity' and 'aesthetics' in the late twentieth century has provided an intellectual environment in which teachers of creative writing have been able to interrogate their practice and expand the possibilities of the subject. This has led to the development of new pedagogical practices drawing from a range of fields: from poststructuralism, psychoanalysis, identity politics and postcolonialism, to linguistics and cognitive scienceucturalism, psychoanalysis, identity politics and postcolonialism, to linguistics and cognitive science … .

(Dawson 2008)

Theory 3

Phase 4

Theory 3: Any knowledge, including from any discipline, can be applied and or synergised at any stage, process, point, in any section, place, object, material, space, time-reference relevant to the researcher: there is no unnecessary confining or exclusion of necessary knowledge.

Phase 3

Creative knowing involves the body and its reaction.

Creative work and knowing are responses that appear to spontaneously be generated.

Formal and informal spaces are conducive to creative activity.

Creative work can have continuous phases.

Phase 2

The feeling body, femininity and mutuality are involved in creative work.

Creative work appears in response to feelings and may be expressed in multiple ways in one project.

Planned, and impliedly unplanned, spaces involving complex and divergent thinking can enable art and creativity to flourish.

Creativity concerns a series of continuous action, or set of actions, operation, or series of changes designed to take place in a definite manner.

Phase 1

<u>Takolander 2014</u>

> [T]he work of the sociobiologist Ellen Dissanayake and of the neuroscientist Antonio Damasio invite new ways of thinking about the role of the feeling body, femininity and mutuality in creative practice.
>
> (Takolander 2014)

<u>Krauth 2011</u>

> It was a dissertation-length account of the writer's writing and performing processes, but it used radical tactics such as mixing academic prose with poetic musings; incorporating poems and raw notes; citing whale-song; mounting its own green protest campaign; exploring the candidate's own body, its movement and breathing; and generally forcing the blend of the academic with the poetic to the extreme.
>
> (Krauth 2011)

<u>Graham 2009</u>

> From these theses, a six-step strategy was devised involving creative space embodying individuality, cultural heritage and social interaction: action learning embodying cultural heritage, economic application and social interaction; critical-creative assessments embodying individuality, cultural heritage, economic application and social interaction … .
>
> (Graham 2009)

<u>Exploring the Arts Foundation 2021</u>

<mark>Creativity is the state or quality of being creative. It's the capacity to transcend traditional ideas, rules, patterns, relationships, or the like, and to originate meaningful new ideas, forms, methods, interpretations, etc.; it's to express originality, progressiveness, or imagination.</mark>
<mark>As a process, creativity is a systematic series of actions directed toward some new or different end or objective; it's a continuous action or set of actions, operation, or series of changes designed to take place in a definite manner that produces a novel result.</mark>

(Exploring the Arts Foundation 2021)

<u>Theory 4</u>

Phase 4

Theory 4: The researcher determines what is necessary knowledge within the bounds of the research project.

Phase 3

Creativity can be dynamic and highly varied and personal, and is driven by the researcher's interests.

Artist's may choose to follow pathways that transcend traditional ideas, rules, patterns, relationships to find new ideas, forms, methods, interpretations, etc.

Phase 2

An artist's personal interests may direct their craft: e.g. prose and poetry, whale-song, and performance and body responses.

Creative is a state impliedly involving the researcher seeking out new meanings and patterns in areas of and using knowledges of personal choice.

Phase 1

Krauth 2011

It was a dissertation-length account of the writer's writing and performing processes, but it used radical tactics such as mixing academic prose with poetic musings; incorporating poems and raw notes; citing whale-song; mounting its own green protest campaign; exploring the candidate's own body, its movement and breathing; and generally forcing the blend of the academic with the poetic to the extreme.

(Krauth 2011)

Exploring the Arts Foundation 2021

To be creative is to demonstrate the quality or power of creating; to produce a thing resulting from originality of thought, expression. It's to be imaginative, originative, or productive, as in writing creatively.

Creativity is the state or quality of being creative. It's the capacity to transcend traditional ideas, rules, patterns, relationships, or the like, and to originate meaningful new ideas, forms, methods, interpretations, etc.; it's to express originality, progressiveness, or imagination.

(Exploring the Arts Foundation 2021)

<u>Theory 5</u>

Phase 4

Theory 5: A goal of the practitioner is to synergise knowledge on at least one topic in a unique way to produce new meaningful insights and knowledge.

Phase 3

Artists' works are original displays of unique creative synergisation on a topic or the topics of choice.

Artists' synergise knowledge for the purpose of inventing something unique.

Phase 2

Artists may, impliedly, express their ideas through more than one mode and in one or more ways.

Artists transcend existing knowledges to work that is original or progressive; and directed to some new or different end or objective.

Phase 1

Krauth 2011

It was a dissertation-length account of the writer's writing and performing processes, but it used radical tactics such as mixing academic prose with poetic musings; incorporating poems and raw notes; citing whale-song; mounting its own green protest campaign; exploring the candidate's own body, its movement and breathing; and generally forcing the blend of the academic with the poetic to the extreme.

(Krauth 2011)

Exploring the Arts Foundation 2021

To create anything is to cause it to come into being, as something unique that would not naturally evolve or that is not made by ordinary processes. It's to evolve a thing from one's own thought or imagination, as a work of art, an invention, or as the contents of a creative work of writing.

To be creative is to demonstrate the quality or power of creating; to produce a thing resulting from originality of thought, expression. It's to be imaginative, originative, or productive, as in writing creatively.

Creativity is the state or quality of being creative. It's the capacity to transcend traditional ideas, rules, patterns, relationships, or the like, and to originate meaningful new ideas, forms, methods, interpretations, etc.; it's to express originality, progressiveness, or imagination.

As a process, creativity is a systematic series of actions directed toward some new or different end or objective; it's a continuous action or set of actions, operation, or series of changes designed to take place in a definite manner that produces a novel result.

(Exploring the Arts Foundation 2021)

Theory 6

Phase 4

Theory 6: Disciplinary or artificial boundaries give way to the integration of all relevant knowledges, methods, processes and practices as required.

Phase 3

Discipline boundaries give way in art and enable persons to transform the way they see or perform subjects of interest.

Art development may involve the formal or informal crossing of multiple disciplinary or domain knowledges and involve multiple processes.

Art suggests the transcending of traditional boundaries to originate new ideas, forms, methods, interpretations etc.

Art deliberately crosses theoretical and applied boundaries to produce new meaning.

Phase 2

Producing artwork may involve crossing multiple discipline boundaries for the artist to creatively deliver the artist's meaning.

Structured processes for developing art can involve the crossing of multiple boundaries to aid in producing original work on a topic.

Art originality concerns transcending traditional ideas, rules, patterns, relationships, or the like, to originate meaningful new ideas, forms, methods, interpretations, etc.

Artists may formally or informally draw from a range of intellectual fields to interrogate their practice and expand ideas.

Phase 1

Krauth 2011

> It was a dissertation-length account of the writer's writing and performing processes, but it used radical tactics such as mixing academic prose with poetic musings; incorporating poems and raw notes; citing whale-song; mounting its own green protest campaign; exploring the candidate's own body, its movement and breathing; and generally forcing the blend of the academic with the poetic to the extreme.
>
> (Krauth 2011)

Graham 2009

> From these theses, a six-step strategy was devised involving creative space embodying individuality, cultural heritage and social interaction: action learning embodying cultural heritage, economic application and social interaction; critical-creative assessments embodying individuality, cultural heritage, economic application and social interaction … .
>
> (Graham 2009)

Exploring the Arts Foundation 2021

> Creativity is the state or quality of being creative. It's the capacity to transcend traditional ideas, rules,

patterns, relationships, or the like, and to originate meaningful new ideas, forms, methods, interpretations, etc.; it's to express originality, progressiveness, or imagination.

(Exploring the Arts Foundation 2021)

Dawson 2008

The widespread academic critique of traditional categories such as 'literature', 'creativity' and 'aesthetics' in the late twentieth century has provided an intellectual environment in which teachers of creative writing have been able to interrogate their practice and expand the possibilities of the subject. This has led to the development of new pedagogical practices drawing from a range of fields: from poststructuralism, psychoanalysis, identity politics and postcolonialism, to linguistics and cognitive scienceucturalism, psychoanalysis, identity politics and postcolonialism, to linguistics and cognitive science … .

(Dawson 2008)

Theory 7

Phase 4

Theory 7: New knowledge discovered during the research process may instantly be treated as a form of pre-existing knowledge to be explored and or synergised during research processes.

Phase 3

New knowledge generated through the research process can be explored in new ways during the research process.

Formal methods, and informal methods impliedly, can be used to generate new creative

works, and from this creative product generate new creative works.

Phase 2

Artists use knowledge applied and generated through creative works to apply to generate new stimulating works during creative processes.

Formal methods, and informal methods impliedly, in the form of "programs" may generate creative works and involve the continued development of new creative works from them in the research process.

Phase 1

Krauth 2011

It was a dissertation-length account of the writer's writing and performing processes, but it used radical tactics such as mixing academic prose with poetic musings; incorporating poems and raw notes; citing whale-song; mounting its own green protest campaign; exploring the candidate's own body, its movement and breathing; and generally forcing the blend of the academic with the poetic to the extreme.

(Krauth 2011)

Graham 2009

From these theses, a six-step strategy was devised involving creative space embodying individuality, cultural heritage and social interaction: action learning embodying cultural heritage, economic application and social interaction; critical-creative assessments embodying individuality, cultural heritage, economic application and social interaction contextualized application embodying

(Graham 2009)

Theory 8

Phase 4

Theory 8: Disciplinary knowledges, methods, processes and practices may be combined and or integrated as required.

Phase 3

Divergent knowledges can be brought together in creative practice and integrated as required; including differing methodologies, methods, processes or processes.

Phase 2

Divergent fields of knowledge can be combined in the arts including from all desired or necessary areas of knowledge; and impliedly, may involve combining methodologies, methods practices and processes.

Phase 1

<u>Brien & Mcallister 2016</u>

This article outlines a series of successful practices employed by two experienced researchers from distinctly different knowledge fields (creative writing –understood as in the applied arts and nursing – understood as in the applied sciences) who have mobilised diverse research methodologies and approaches to work on collaborative multidisciplinary and interdisciplinary social and cultural projects.

(Brien & Mcallister 2016)

<u>Krauth 2011</u>

It was a dissertation-length account of the writer's writing and performing processes, but it used radical tactics such as mixing academic prose with poetic musings; incorporating poems and raw notes; citing whale-song; mounting its own green protest campaign; exploring the candidate's own body, its movement and breathing; and generally forcing the blend of the academic with the poetic to the extreme.

(Krauth 2011)

Graham 2009

From these theses, a six-step strategy was devised involving creative space embodying individuality, cultural heritage and social interaction: action learning embodying cultural heritage, economic application and social interaction; critical-creative assessments embodying individuality,   cultural heritage, economic application and social interaction contextualized application embodying individuality, cultural heritage and economic application; real-time embodying individuality, economic application and social interaction; and transdisciplinarity embodying cultural heritage, economic application and social interaction.

(Graham 2009)

Dawson 2008

The widespread academic critique of traditional categories such as 'literature', 'creativity' and 'aesthetics' in the late twentieth century has provided an intellectual environment in which teachers of creative writing have been able to interrogate their practice and expand the possibilities of the subject. This has led to the development of new pedagogical practices drawing from a range of fields: from poststructuralism, psychoanalysis, identity politics and postcolonialism, to linguistics and cognitive scienceucturalism, psychoanalysis, identity politics and postcolonialism, to linguistics and cognitive science … .

(Dawson 2008)

<u>Theory 9</u>

Phase 4

Theory 9: Researchers experiment with or make comparatively large exploratory and or synergistic creative leaps as pre-existing knowledge is synthesised into new knowledge.

Phase 3

Researchers expressly of impliedly make large exploratory and or synergistic creative leaps between substantially differing knowledges as pre-existing knowledge is synthesised into new knowledge.

Researchers expressly or impliedly experiment with making large exploratory and or synergistic creative leaps between substantially differing knowledges as pre-existing knowledge is synthesised into new knowledge.

Researcher's may formally, and impliedly informally, produce or experiment with producing new knowledge.

Phase 2

Researchers undertake research activities across differing knowledges for the purpose of producing new knowledge.

Researchers undertake research activities across differing knowledges for the purpose of experimenting with producing new knowledge.

Researcher's may in a range of differing contexts formally, and impliedly informally, produce

or experiment with producing new knowledge.

Phase 1

Brien & Mcallister 2016

This article outlines a series of successful practices employed by two experienced researchers from distinctly different knowledge fields (creative writing –understood as in the applied arts and nursing – understood as in the applied sciences) who have mobilised diverse research methodologies and approaches to work on collaborative multidisciplinary and interdisciplinary social and cultural projects.

(Brien & Mcallister 2016)

Krauth 2011;

It was a dissertation-length account of the writer's writing and performing processes, but it used radical tactics such as mixing academic prose with poetic musings; incorporating poems and raw notes; citing whale-song; mounting its own green protest campaign; exploring the candidate's own body, its movement and breathing; and generally forcing the blend of the academic with the poetic to the extreme.

(Krauth 2011)

Graham 2009

From these theses, a six-step strategy was devised involving creative space embodying individuality, cultural heritage and social interaction: action learning embodying cultural heritage, economic application and social interaction; critical-creative assessments embodying individuality, cultural heritage, economic application and social interaction contextualized application embodying individuality, cultural heritage and economic application; real-time embodying individuality, economic

application and social interaction; and transdisciplinarity embodying cultural heritage, economic application and social interaction.

<div align="center">(Graham 2009)</div>

Exploring the Arts Foundation 2021

To create anything is to cause it to come into being, as something unique that would not naturally evolve or that is not made by ordinary processes. It's to evolve a thing from one's own thought or imagination, as a work of art, an invention, or as the contents of a creative work of writing.

To be creative is to demonstrate the quality or power of creating; to produce a thing resulting from originality of thought, expression. It's to be imaginative, originative, or productive, as in writing creatively.

Creativity is the state or quality of being creative. It's the capacity to transcend traditional ideas, rules, patterns, relationships, or the like, and to originate meaningful new ideas, forms, methods, interpretations, etc.; it's to express originality, progressiveness, or imagination.

As a process, creativity is a systematic series of actions directed toward some new or different end or objective; it's a continuous action or set of actions, operation, or series of changes designed to take place in a definite manner that produces a novel result.

<div align="center">(Exploring the Arts Foundation 2021)</div>

The widespread academic critique of traditional categories such as 'literature', 'creativity' and 'aesthetics' in the late twentieth century has provided an intellectual environment in which teachers of creative writing have been able to interrogate their practice and expand the possibilities of the subject. This has led to the development of new pedagogical practices drawing from a range of fields: from poststructuralism, psychoanalysis, identity politics and postcolonialism, to linguistics and cognitive scienceucturalism, psychoanalysis, identity politics and postcolonialism, to linguistics and cognitive science … .

(Dawson 2008)

Table 7.2: List of Practice Research Theory Theories

Theory #	Practice Research Theory
1	All of Aristotle Knowledge Development Theory applies to the following Practice Research Theory theories
2	All pre-existing knowledge is both creative-sensory and scientific-logical phenomena
3	Any knowledge, including from any discipline, can be applied and or synergised at any stage, process, point, in any section, place, object, material, space, time-reference relevant to the researcher: there is no unnecessary confining or exclusion of necessary knowledge
4	The researcher determines what is necessary knowledge within the bounds of the research project
5	A goal of the practitioner is to synergise knowledge on at least one topic in a unique way to produce new meaningful insights and knowledge
6	Disciplinary or artificial boundaries give way to the integration of all relevant knowledges, methods, processes and practices as required
7	New knowledge discovered during the research process may instantly be treated as a form of pre-existing knowledge to be explored and or synergised during research processes
8	Disciplinary knowledges, methods, processes and practices may be combined and or integrated as required
9	Researchers experiment with or make comparatively large exploratory and or synergistic creative leaps as pre-existing knowledge is synthesised into new knowledge

Appendix 2

Aristotle Knowledge Development Practices were extracted by the researcher during the research process from key Aristotle texts using spontaneous grounded theory, and were used by the researcher during the research process and are implied in the researcher's literature review method practices generally.

Aristotle's Knowledge Development Practices

Aristotle Knowledge Development Practices require the researcher to: identify the research subject (or subjects) and the academic discipline (or disciplines) (Aristotle 350BCc). A survey of pre-existing knowledge must be conducted to enable the researcher to find the gap (or gaps) in the knowledge (or knowledges) (Aristotle 350BCa). The type of knowledge gap (or gaps) may suggest to the researcher a particular methodology (or methodologies) or method (or methods) required for adoption for filling the research gap (or gaps) (Aristotle 350BCa); alternatively, the type of research gap may suggest to the researcher discounting particular research methodologies and methods (Aristotle 350BCa). The most appropriate methodology (or methodologies) or method (or methods) should be selected for the research design (Aristotle 350BCd). Categorising, combining or otherwise synergising pre-existing knowledge are appropriate activities for developing knowledge (Aristotle 350BCa; Aristotle 350BCb). The research process involves the (constant) consideration (or reconsideration) of the knowledge generated in the research process, through a process (or processes) that enable new knowledge to be synthesised from existing data (Aristotle 350BCa; Aristotle 350BCb).

<u>Other Necessary Research Practices</u>

The researcher shall record the research in ways that promote wide accessibility, applicability and replicability; identifying new knowledge generated from the research and expressly identifying multiple disciplinary links and shall record the limitations of the research. Future research pathways should be identified.

Appendix 3

<u>Researcher's Literature Review Structural Method</u>

The researcher's literature review development method was highly structured, enabling the efficient development of the literature reviews' content. The researcher's approach is summarised in the following table.

<u>Table 7.3: Literature Review Structural Method</u>

Step	Process
Step 1	Locate relevant data by following the researcher's Inductive Research Method
Step 2	Read the information: deconstruct it and the information's style if necessary. Determine if and to what extent the information is relevant to your study. If it is, proceed with the following steps
Step 3	Use index cards separated in the structural order of your paper, to record key points from journal articles, textbooks and so forth. Add a research reference to the top of the index card
Step 4	In a document, record the relevant sections of your research. Add a link to online versions of the paper (and or save it in a file that conforms with the structure of your project); or copy relevant sections of the textbook or summarise them. Include any quotes that you need to add to your research. Add references to the document links: include surnames or the first surname and "et al." and summarise the relevance of the information in one phrase or sentence
Step 5	Align the index cards in a logical sequential order in the manner that you would like to raise the research issues in your study. Ensure your references in your document follow the same structure and order
Step 6	When you have consolidated enough research, add all the references to your online bibliographical resource or using appropriate software. Do this sequentially, and add the reference to the top of the article or textbook for direct transfer into the research dissertation. Remember that it can take time to write up research, even weeks. Allow enough time to do this. It is sensible to write up research in batches to ensure you meet key research timeframes

Step 7	Write up the research using the index cards as a guide and the documents with quotes. Return to any research as needed by following the links in your research document. Keep the index cards in order and separated and bound in relevant sections to ensure they remain in order for future reference; copy any references from the document and transfer them to your paper as required
Step 8	Ensure that research data is entered into appropriate sections and using appropriate structures in the paper, and is appropriately signposted. Identify groups, trends and nuances in the research data in your research as a whole and record them
Step 9	Identify and record any gaps in the research or limitations of research and record them; identify which gaps in the research you will fill, the importance of the research, and any other unique ways you might use or apply that research to generate new knowledge in your project
Step 10	Add introductions, conclusions and summaries
Step 11	Write literature reviews and methodologies and methods data in the simple present tense. What you expect and how you intend to approach possible findings in the simple future tense. Write introductions, results and discussions in the simple present tense; may also use the present perfect tense if and when appropriate or in substitution for the past tense
Step 12	Summarise key points you would like examiners to know and clearly forewarn them. Add this information throughout your research document.

Appendix 4

Researcher's Inductive Research Method

The researcher developed an inductive research method during the research project, which is summarised in the following table.

Table 7.4: Inductive Research Method

Step	Process
Step 1	Use the researcher's journalling method in the methodologies and methods section to record spontaneous ideas on topics as they form
Step 2	Think about what you may want to research and generate a number of options
Step 3	Consider search terms. Consider possible definitions and the range of alternative search terms
Step 4	Thoroughly examine online databases and conduct catalogue searches for any research that may have been completed on the topic. Catalogue the references in one or more documents based on themes and trends. Copy and paste links to relevant works. Save works in files based on research structures, themes and processes
Step 5	Consider work that has not been completed on the topic; alternatively, work that has been completed in other "jurisdictions" that can be transposed to another jurisdiction
Step 6	Use the researcher's literature review structural method as required
Step 7	Consider the methods that you might wish to use. Applying methods used by other researchers in new contexts is acceptable. Search textbooks for explanations on various methods: copy and paste this information into a methods' document. Follow step two onwards
Step 8	Research the data creatively. Use all your senses to comprehend the data. Engage in arts and scientific side studies for knowledge building if necessary and to creatively "cross-fertilise" the data. Apply research methods, produce results, discuss them, and form conclusions
Step 9	Write key drafts of the work. Include a content page and add charts, tables and so forth when appropriate. Add page numbers
Step 10	Add signposts and other structures where appropriate

Step 11	Polish each section of the document. Complete a spell check. Print the document and manually edit it. Make necessary changes in the document and save it
Step 12	Confirm figures, tables and quotations, etc. Prepare your references. Print the document. Complete a last manual edit of the document. Submit your work

Appendix 5

Practice research terms have been used interchangeably in Creative Writing research, but this researcher clarified practice research during the research process. This enabled the researcher to compare and contrast the new Research-based Practice method with other practice research methods and to indentify its contribution to Creative Writing research.

Practice Research Approaches Incorporating Research-based Practice

Practice Research approaches within the Creative Writing discipline are categorised by the researcher as follows: Practice-based Research (new creative product focused); Practice-led Research (existing practices applied in a new context); and Research-led Practice (existing research applied in a new context); but also now Research-based Practice (new creative research focused).

Research-based Practice is transportable into other research frameworks, as earlier described. Just as there are strong connections between theories, methods, processes and practices as implicated in the development of Research-based Practice, there may be two or more practice research approaches in exegetical writing.

The following figure depicts all four Creative Writing research approaches in the context of a "novel", but equally is applicable to all forms of Creative Writing research requiring the researcher to generate an original creative writing product. While all four practice research

approaches are contained within the researcher's thesis above, Research-based Practice is the

overwhelming approach used by the researcher.

Figure 7.1: Four Practice Research Approaches

Practice-based Research (e.g. a new cultural novell developed and the focus of research).

Practice-led Research (e.g. applying the themes of one genre in a different genre context).

Research-led Practice (e.g. exploring social-sciences research in novel themes).

Research-based Practice (e.g. new theory or method developed during the research process, then applied in a novel).
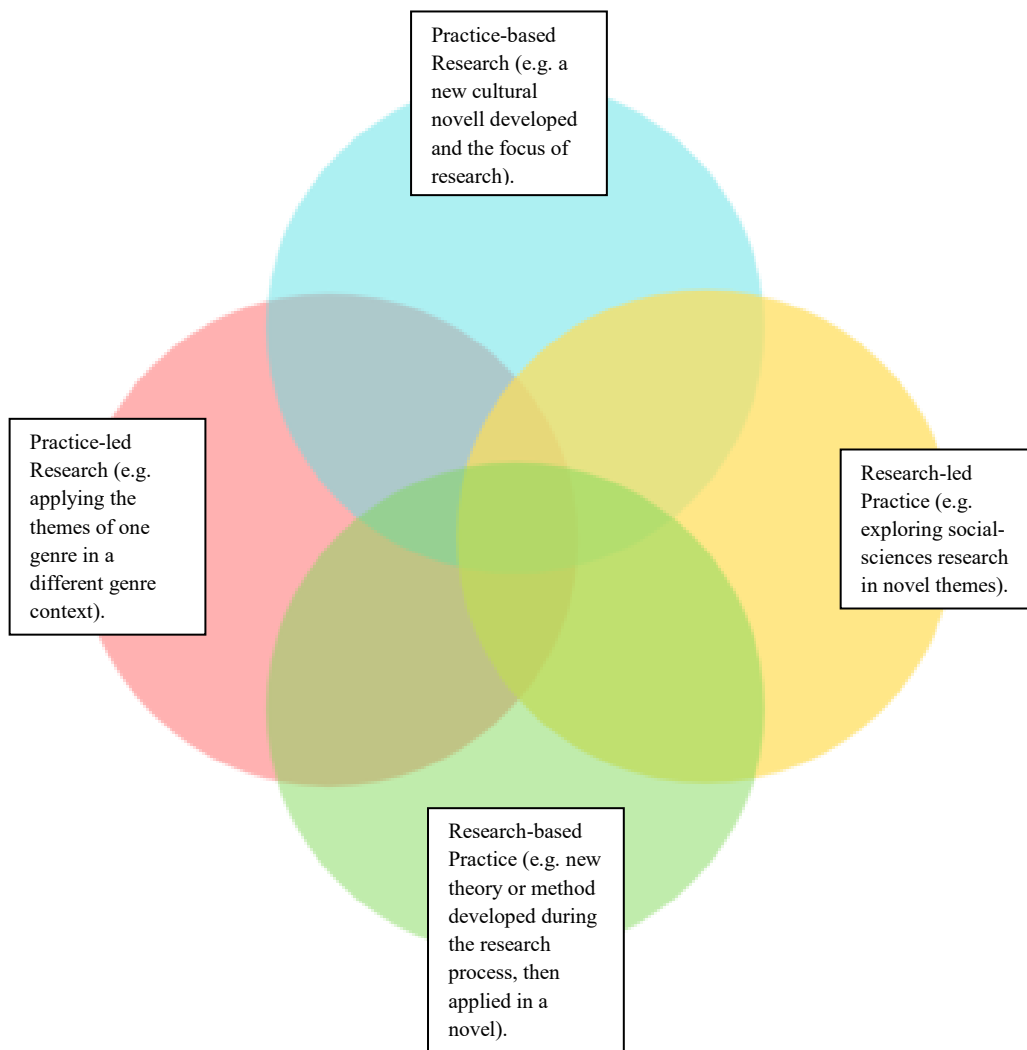
Appendix 6

The researcher developed the following mathematical modelling quality framework as a reference point for building, assessing, testing and verifying the quality of the original PD model and its expressions. The researcher was unable to locate a similar framework in the literature.

Perrenet et al (2017) finds that mathematical quality control criteria are rare or highly limited (Perrenet et al. 2017, p. 142) and suggests a need for modelling quality control criteria; but notes that models may explain or predict phenomena or be "inspirational" or a combination of these types (Perrenet et al. 2017, pp. 142 - 143).

<u>Mathematical Modelling Quality Framework</u>

The researcher's Mathematical Modelling Quality Framework details the mathematical modelling quality criteria, which asks the researcher to appropriately justify:

(a) the type of information being modelled (simple or complex information); (b) the level of mathematical detail required (holistic or limited); (c) the modelling approach (simple or complex); (d) the level of precision necessary (exact or approximate); (e) transfiguration limitations (the degree of modelling difficulty); (f) the modelling purpose (problem being solved and rationale); (g) the mathematics field (highly relevant and justifiable); (h) the model's possible audiences and uses (professional reliance or educational; accessibility); (i) model reliability (effectiveness); (j) model elegance and efficiency (aesthetics and

sufficiency); (k) acceptance factors (relevant perceptions; adoption considerations; appropriate symbolism) of the model; and (l) human or other species relevance (appropriate; beneficial).

The mathematical modeller should assess on a scale of $0 - 10$ to what degree he, she or they meet the mathematical modelling quality framework criteria and address improvements where necessary. That said, a number of the criteria if not done appropriately, may warrant the model being reconsidered. Existing mathematical models may be re-examined and re-evaluated according to this modelling framework.

The researcher confirms the original PD model meets the Mathematical Modelling Quality Framework criteria. The researcher included the elongated oval centre in the original PD geometric model to represent the "human presence", given the model applies to humans and references human motivations.

Appendix 7

This appendix evidences the researcher's physics experiments and results, which are embedded in the novella story. This also shows how broad Creative Writing science fiction research may be and the fact-finding processes that may occur. It also is an interpretative tool for understanding the researcher's novella development procedures.

> There is good reason to suppose that our best physical theories are false: In addition to its own internal problems, the standard formulation of quantum mechanics is logically incompatible with special relativity. I will also argue that we have no concrete idea what it means to claim that these theories are approximately true.
>
> (Barrett 2003)

"Science Fiction" Physics Theory Approaches

In developing novella themes, the researcher explored Einstein's theories for the purpose using them in the original science fiction novella. The researcher, unfortunately, finds Einstein's theories to be trite or false (Rothman 2011): this occurred after applying scientific research, cognition, journalling, drawings, earth matter and various art-forms (including body movement) to conduct relevant "experiments"; and assumes that the explanations for the universe were all around the researcher. The researcher finds that Einstein had developed mathematical-physics models that were significantly abstracted from real-life empirical observable factors, and had produced highly artificial and limited views of reality: one obviously relevant to mathematical calculations but not real-life in the researcher's view.

Furthermore, the researcher found that observations in the universe could be explained through simpler deconstructions and more natural descriptions.

It then became apparent to the researcher that Einstein and others have not in the researcher's view sufficiently proved Einstein's theories: there are a range of complimentary findings but nothing concretely confirms Einstein's own views (Rothman 2011; Helmenstine 2019; Soter & Tyson 2000). If scientists potentially engage in fiction, then it is time for science fiction writers to engage in science: the researcher finds in this original thesis that this has occurred in science fiction for some time.

An example of unsupportive research on Einstein's findings follow, but other similar literature is available through general searches for the same:

> In his paper, Einstein derived $\Delta L = \Delta mc^2$ (light energy–mass equation). It has not been completely studied; it is only valid under special conditions of the parameters involved, e.g., number of light waves, magnitude of light energy, angles at which waves are emitted and relative velocity v. Einstein considered just two light waves of equal energy, emitted in opposite directions and the relative velocity v uniform. There are numerous possibilities for the parameters which were not considered in Einstein's derivation. $\Delta E = \Delta mc^2$ is obtained from $\Delta L = \Delta mc^2$ by simply replacing L by E (all energy) without derivation. Fadner … correctly pointed out that Einstein neither mentioned E or $\Delta E = \Delta mc^2$ in the derivation. Herein additional results are critically analyzed, taking all possible variables into account. Under some valid conditions of parameters, $\Delta L = \Delta mc^2$ is not obtained, e.g., sometimes the result is $M_a = M_b$ or no equation is derivable. If all values of valid parameters are taken into account, then the same derivation also gives $L \propto \Delta mc^2$ or $L = A \Delta mc^2$, where A is a coefficient of proportionality. Thus, Einstein's derivation under valid parameters also predicts that energy emitted may be less than or more than $\Delta L = \Delta mc^2$.

(Sharma 2013, p. 509)

The first paper is written by Hua Di. He writes that Einstein's general theory of relativity cannot explain the perihelion motion of Mercury. Einstein's explanation, based on wrong integral calculus and arbitrary approximations, is a complete failure.

The following paper is written by Li Zifeng. His paper reviews basic hypotheses and viewpoints of space-time relationship in Special Relativity; analyzes derivation processes and the mistakes in the Lorentz transformation and Einstein's original paper. The transformation between two coordinate systems moving uniformly relatively to another is established. It is shown that Special Relativity based upon the Lorentz transformation is not correct, and that the relative speed between two objects can be faster than the speed of light.

The next paper is written by Li Wen-Xiu. His paper presents problems with the special theory of relativity (STR), including: (1) The principle of relativity as interpreted by Einstein conflicts with the uniqueness of the universe. (2) The light principle conflicts with the notion that natural phenomena depend only upon mutual interaction and the involved relative motion. The principle contains a tacit assumption that leads to self-contradiction.

The next paper by Shi Yong-Cheng says that Einstein's book "The Meaning of Relativity" contains of a supper mistake which leads to the famous twin "paradox".

The following paper by Xu Jianmin proposes the assumptions of radiation and redshift, establishes the quantum gravitational field equations and motion equations, and presents that particles move along the path with the minimum entropy production. The paper also applies the equivalence principle of acceleration and the gravitational field into the electromagnetic field, which makes the electromagnetic field equation to have the same form with gravitational field equation.

The next paper is written by Dong Jingfeng. By the analysis of twin paradox, it is pointed out that the constriction of space-time is the only effect of measurement and all paradoxes do not exist actually. The essence of special relativity is a number method for ways to provide math and physical idea.

The following paper is written by Duan Zhongxiao. Through comparing the two Lorentz transformations located at different regions, the author finds that for two inertial systems running the relative uniform speed translational motion, if two clocks are synchronous in one system, they are also synchronous looked from another system; this means that the relative character of simultaneity is not

the ultimate source of temporal and spatial transformation. Thus we know that it is wrong to introduce the one-way spreading light signals along with all directions in space into transformation.

Fu Yuhua writes the next paper. He says that special theory of relativity and general theory of relativity have three basic shortcomings. First, the special and general theory of relativity respectively have two basic principles, altogether have four basic principles in the interior of relativity, these obviously do not conform to the truth uniqueness. Second, for the two basic principles of special theory of relativity and the two basic principles of general theory of relativity, no one is generally correct. Third, establishes the physical theory from the mathematics principle instead of the physical principle. Based on these, the applicable scopes of special and general theory of relativity are presented.

Guo Kaizhe and Guo Chongwu write the following paper. They write that there are magnetic field forces between positive charge and negative charge in an electric dipole which is moving in a laboratory reference frame. Whereas, examining the electric dipole in a reference

frame which is at rest relative to the electric dipole, we find no magnetic field force exists between the two charges.

The next paper is written by Guo Ying-Huan and Guo Zhen-Hua. They write that by carefully comparing the results given by the general theory of relativity and the actual astronomical observation, the contradiction between them is found to be difficult to overcome. Furthermore, there is no sign so far of the existence of "the waves" predicted by the general theory of relativity.

Hu Chang-Wei writes the next paper. According to him, in the absolute space-time theory, the ether is a compressible super fluid, a change in the ether density causes a change in the actual space-time standard, and thus, the phenomena occur. The relativity made up the shortcoming of absolute space-time theory in quantity, while the physical basis of relativity can be described and its limitations can be showed on the basis of absolute space-time theory.

Jiang Chun-Xuan writes the following paper. Using two methods he deduces the new gravitational formula. Gravity is the tachyonic centripetal force.

In the next paper, he also found a new gravitational formula: … established the expansion theory of the universe, and obtained the expansion acceleration: … .

Liu Taixiang writes the following paper. On the basis of the system relativity, the author firstly proves the absoluteness of movement, and then deduces the conclusion that time derives from movement,

then subsequently obtains such properties of time as one dimension, irreversibility, infiniteness, non-uniformity and relativity, etc. by illustrating the relationship between time and space and the concept of universe state, and ultimately deduces a steady cosmological model and a prospect of the total universe.

Tu Runsheng writes the next paper. He writes that in a limited number of experiments that support Theory of Relativity, there also exist some points that are not supportive of the theory. Therefore, Theory of Relativity does not solve the problem of experimental verification.

The following paper is written by Wu Fengming. According to the "paradox of singularity theorem" proof of concept of time, the mathematical logic and the prerequisite conditions, based on successive analytical, logical argumentation about time singularity theorem proving the beginning and the end of the conclusions cannot be established.

Yang Shijia writes that he has studied Einstein's original "on the Electrodynamics of Moving Body" for many years, found its own 30 unsolved problems at least, Einstein's theory of relativity is a mistake from beginning to end.

Chao Shenglin writes in the next paper that if ones think of the possibility of the existence of the superluminal-speeds (the speeds faster than that of light) and re-describe the special theory of relativity following Einstein's way, it could be supposed that the physical space-time is a Finsler space-time.

In the following paper, Fu Yuhua writes that although the explanation of general relativity for the advance of planetary perihelion is reasonably consistent with the observed data, because its orbit is not closed, whether or not it is consistent with the law of conservation of energy has not been verified.

For this reason a new explanation is presented: The advance of planetary perihelion is the combined result of two motions. The first elliptical motion creates the perihelion, and the second vortex motion creates the advance of perihelion.

Sapogin, Dzhanibekov, and Ryabov discuss the problems of new unitary quantum view of the world in its applications to the different aspects of the reality.

In the last paper, Florentin Smarandache revisits several paradoxes, inconsistencies, contradictions, and anomalies in the Special and General Theories of Relativity. Also, he re-proposes new types of Relativities and two physical experiments.

<div align="center">(Smarandache, Yuhua & Fengjuan 2013, pp. iv - vi)</div>

Einstein's theories appear to the researcher to exist on a philosophical scale between theoretical and practical, and appear more physics' mathematics relevant. Einstein's theories do not capture whatsoever, in the researcher's view, a true empirical view of the universe, and therefore appear mythological.

The nature of time: is calculated by virtue of mechanical turns or digital programming; is clearly a "measurement". A metical or digital "clock" is affected by space gravitational forces or acceleration or mechanical or electrical faults affect its designed operation. Time does not exist in nature; time itself as a perfect measurement of anything is theoretical. Space-time, unfortunately, is clearly a false mythology. The effect of time will be deconstructed in the novella.

The formula $E = mc^2$: is problematic because: it implies all things can spontaneously be converted to pure "massless" energy. This phenomenon has not been "observed", is theorised and will never be unequivocally proven: because it is false. The constant speed of light in a vacuum relies on the hypothetical vacuum. A true vacuum is fictional, and this is relevant with regards to special relativity. Light moves at different speeds in different mediums. Now objects with mass are accepted to move at indistinguishable speeds to light (Siegel 2020), suggests that current light speeds shall be surpassed.

There are significant inefficiencies in converting mass into energy. Therefore, this assumption built into the $E = mc^2$ formula appears fictional. The formula implies that sophisticated life-forms which contain mass, or any "animate" thing (including the mythologised "inanimate") can be unsophisticated promptly and wholly, and should be made

available for corporations. Effectively, the formula lowers the value of human life; makes human life expendable; and could be a rationale "informing" genocide. Grossly devalues animates. Furthermore, that electricity should be made vastly available. These are deplorable results that can be predicted by the model. The researcher notes that Einstein's family had an interest in this regard. Considerable unsophistication, once it occurs, is very difficult if not impossible to reverse. Pollution is detrimental. And gases leave the Earth's surfaces as does radiation. The formula $E = mc^2$ is highly misleading and in the researcher's view, is not accurate.

Regarding the theoretical constancy of the speed of light being the same for all observers and its "inexplicability" (Encyclopedia Britannica 2021c), the researcher considers this should be a subjective finding, explained through analogy:

- If my friend is travelling in an adjacent train to mine and both trains are travelling at the speed of 100 kms per hour, and uniformly in the same direction then it would appear we are stationary. But here's where is gets tricky: if we are both travelling hypothetically at the speed of light and on separate beams of light, then we will still appear stationary at any given point. But if my friend's light encounters resistance, assuming we are aliens and are unable to be affected by the mere universe, then my friend unfortunately quickly disappears. Of course, light can travel at different speeds if it encounters different degrees of resistance. Of course we would need to have incredible superpowers to experience the second experiment and Einstein expects the same in his thought experiments.

- If I walk up the street briskly, I might move at a constant speed. If I have more energy the next morning and literally dance up the street, it is still possible I might move at the same constant speed. Alternatively, if I try and move a light car from a running or walking start, with more of an obvious over excessive use of energy on the former start and pressing forward, well I might simply move the aircraft at the same constant speed in both situations. This is simply my "property"; and because I am weak and experience resistance. Perhaps different wavelengths of light simply reflect light's electromagnetic capacities at different energy levels.

More on special relativity: which the researcher suggests should be replaced by a space and gravity/acceleration view, which appears more consistent with empirical observations and can be used to explain current relativistic concepts: such as "time-dilation", "contraction", and so forth.

More on general relativity, and relevant to special relativity: is that space-time curvature (Encyclopedia Britannica 2022b) can be explained by the effects of gravity; even mediated by acceleration; and further the aether (Neal 2018):

- Most large objects in space appear to be floating like gas, in another gas or fluid. Everything is falling: forming into condensed gases, liquids, and solids; this creates density and spin; causing attraction. Objects nearby are pulled in, those further away are flung further away. Everything is connected in spins through gravity and acceleration. Gravity is that fact that close objects are falling, and others further away are flung further away. Densification and acceleration are the feeling of falling.

Acceleration down or acceleration up: still we are falling. Gravity and acceleration are like having the ability to fall in different directions simultaneously.

While "fabric" of space-time implies fabrication, and some sort of human design and is not naturally occurring. The researcher's gravity-acceleration proposition assumes that "everything is connected" in the universe but in a more natural way.

Thus it seems to this researcher that physics theories relying on evidence that cannot be provided with regards to absolute properties are too abstractly theorised and science fiction, and involves significant guesswork and should be highly scrutinised. Because Einstein explains his theories in science fiction terms and without proof they must be doubted. This is a wonderful thing because it provides other physics researchers the opportunity to reimagine existence.

For the purpose of the original novella, the researcher: identifies time as a theoretical measure; and assumes the speed of light will be surpassed. The researcher adopts a gravity mass-densification and acceleration mass-loss/mass-gain view of the universe, with an aether component (defined as the product that passes-through and suspends all matter): identified in the novella as Y—d. The "accelarmtron" device is connected with the gravity and acceleration concept and evidences the body's responses to similar forces being embodied.

Appendix 8

This section concerns the researcher's treatment of humans, animals and gender in the original novella.

The researcher examined Charles Darwin's *On the Origins of Species by Means of Natural Selection, or Preservation of Favoured Races in the Struggle for Life* (Darwin 1859) because the researcher's science fiction novella depicts human beings in the future having greater reproduction choices. The researcher notes the title of the work strongly appears racist, which suggests bias, and caused the researcher to investigate the work and its implications.

The researcher notes that Darwin's work suggests:

- that plants and animals should be considered lowly and debase, and likewise humans. Darwin subverts the glory of living creatures in all their beauty and complexity

- suggests or implies eugencial breeding and racism

- supports a natural view of slavery from highly limited circumstances

- natural selection is implicated in human selection but Darwin does not provide sufficient evidence and discussion of the different causes for survival

- wrongly implicates "animal" farming selection processes which appears to have implications for humans

- presents a very hierarchical and dominant survival of the fittest view of species, a very narrow view, which could have been influenced by Darwin's cultural experiences and is far too narrow a lens to view the animal kingdom. .

Darwin's views also strongly imply the influence of economics and constitute a production and exploitation view of animals.

The dominant group is not necessarily the most fittest or adapted group, but according to Darwin's implications is the most "favoured" group. Gene variations that are dominant are not always the most helpful. Group supports, appropriate mentoring, economic opportunity, upbringing, money and religious belief strengths can all increase the prosperity of individuals; and most often these have little to do with being the fittest. Therefore, the idea of survival of the fittest is not accurate and shunts all the other possibilities that other can apply. Similarly, the researcher suggests that competition anxiety and poverty, and in opposition to Darwin's emphases, do facilitate group increases, which strongly implies survival but not in the Darwinian sense. But another question is whether Darwin is trying to implicate survival as the bottom floor or the high ceiling? It appears, the high ceiling.

At the extreme and ridiculous end of Darwin's thinking, policies would be designed in a farming economics sense, which would be to favour those who appear to have dominate and fit characteristics and punish those who do not. This is policy genocide and policies should never be designed in so an abhorrent manner. Furthermore, glorious animals and humans were never meant to be farmed, which has implications for further binary research in the development of the world.

The notion of survival of the fittest is brutal and only indoctrinates violence towards others. It logically leads to major discriminations against people in poverty, including minorities forced into poverty. The concept is irrational and can easily be a rational for exploiting others. Furthermore, it suggests genocide, in the sense that a ruthless person could take "survival of

the fittest" and its implications to the extreme by ensuring only the survival of the fittest (or the most aggressive). Furthermore, the notion is destructive and could be a source of social harms. It unravels society and allows one group to pick on other groups. Both in the farming and social sense, this is wrong. In the extreme, the concept would be a source of horrendous genocide, degradation of others and a cause of racial targeting.

Darwin's *The Descent of Man: and Selection in Relation to Sex* (Darwin 1871), further shows the limitations for Darwin's theories. Human population sizes and general variability are reasons against reproduction being a necessity or sexual relations being a necessity. Dominant persons do not necessarily make ideal mates and offspring are no longer necessarily derived from sex for modern humans. Darwin's ideas imply gendered violence. It relation to all animals, eugenics denies animals choices; in humans, intentional or unintentional reproduction with another human without consent should be signalled as rape, and the same should apply to animals. Natural, instinctual and psychological reasons for sex among humans do not necessarily lead to successful offspring: there are many factors involved (e.g. cultural expectations, etc). Sex selection can move in opposition to natural selection. The gain of reproducing can come with an exorbitant price tag. We all share so much compatibility with others through DNA and culture that reproduction appears a luxury.

Humans are far, far, far, far, far, far more sophisticated, capable of more complex thought, are highly tool and technological orientated than all other animates. Humans have the greatest capacities for helping others. To suggest gross and contextually false analogies towards them is highly shocking.

The researcher intends to adopt a psychosocial model of molecular and gene variation (McDade et al. 2017) referenced as coupled with overt densification and acceleration of matter in the humanoid or animal, causing temporary and permanent change in the animate (e.g. DNA change). The normal positive interaction and densification and acceleration of matter in beings in the novella, results in increased knowledge sophistication. The highly overt densification and acceleration of matter in beings in the novella results in the unsophistication of knowledge, and the enhanced decay, dying and suffering of the individual. Knowledge unsophistication is examined through the accelarmtron device. Non-binary gender is considered.

Appendix 9

The researcher's views of knowledge contained in the original novella, are supported by the researcher's findings in this section.

Knowledge Creation Definition

The researcher draws on Aristotle's Knowledge Development Theory in defining knowledge creation: 1. Knowledge creation is an active process involving the synergisation of pre-existing knowledge/s and can be achieved through various means.

Knowledge Definition

The researcher draws on the above definition in defining knowledge, Aristotle Knowledge Development Theory, embodied knowledge, and knowledge obtained through experiments with scientific knowledge: 2. Knowledge exists in all things and is experienced as a change of state.

This definition of knowledge implies that all things are animate (atoms experience change through electrical and chemical change; densification and acceleration fluctuations), hence everything is "alive" and life exists in everything! The researcher further adopts the view that all animate things have varying degrees of sophistication but must be highly respected and revered.

The researcher adopts the view that humans are the highest sophisticated knowledge in the known universe. Humans have the responsibility and capacity to support, where possible, the sophistication or gradual sophistication of all knowledges. The alternative, which is the unsophistication of knowledge, may signal binary selfishness. All of these findings are reflected in the novella.

Appendix 10

The researcher conducted "sensory" studies the results of which are contained below, and are implied in the researcher's novella and were further extended by scientific studies by the researcher.

Expanding the Senses

The following represents an expanded view of the body's sensory components:

Skin	Brain	Stomach
Ears	Spine	Liver
Eyes	Heart	Kidneys
Nose	Lungs	Intestines
Mouth	Bladder	Bone
Thought	Hairs	Spleen
Nerves	Lymphatic system	Chemical/Electrical
Vein	Bladder	Groin

This expanded view of sensory parts of the body more readily reflects what humans are capable of experiencing and sensing. The implications are that things that overtly densify or accelerate these sensory parts of the body, cause harm to the body: this can be from internal or external stimuli, all "internalised" regardless. This has implications for quality bodily inputs and exposures. These ideas are interwoven throughout the researcher's novella.

Appendix 11

This section reveals the researcher's journalling approach "generally" and does not implicate the "vastness" of the researcher's journalling research methods and processes during the drafting of original novella, PD model and thesis content. Journalling as a technique indicated below, was used together with Research-based Practice, and aided the researcher's effective and efficient fusion of all knowledges during the research project.

Researcher's General Journalling Studies

Month 1

- All ideas and knowledge fusion occurred on white pages without lines, simultaneously or as quick as possible.

- Journals were left in five commonly frequented locations: e.g. study desk, kitchen, lounge, bedside table, etc.

- Flux of ideas occurred during the day and night almost continuously, as this intense research process commenced

- Creative story draft in a smaller form.

- Economics game theory and prisoner's dilemma and iterated prisoner's dilemma models researched thoroughly.

- Interrogation and prison scenarios enacted.

- Aristotle knowledge theory researched.

- Methods put on paper.

- Swapped handedness.

- Massive quality food requirements. South Australian wine sampled.

- Science researched for preparing the science fiction component of the original thesis.

- Within 5 days much of the groundwork for the original novella, PD model and thesis had been done, and editing and extension of these draft products occurred over the next two days.

- All feelings and miscellaneous thoughts placed on paper promptly addressed.

- Started absorbing relevant creative writing, economics, mathematics, and physics texts relevant to the thesis and novella components.

- Made clay miniatures of celestial bodies, listened to Triple J, played the organ and programmed in three languages at key intervals.

- Read a range of relevant works.

…

Month 2

- Conducted physics experiments involving movement, drawing studies, visualisation, re-enactments and relevant analogies: drew black hole, solar systems, light and celestial vectors. Read physics research.

- Further sub-research goals and links identified.

- Biological, chemical and quantum physics studied.

- Biology, biological systems, medicine and medicines studied.

- Psychology and trauma studied.

- Extended creative story.

- Criminals disengaged from workforce participation. Why?

- Key religions and religious-texts examined, spiritually and empirically.

- Trauma as represented in overt densification and acceleration of body molecules: "sensed" and measurable.

- Mental trauma, are physical molecules damaged?: the mind is fiction. Thought and images are biochemically-physically real.

- What are models?

- What is religion? What is the economics religion?

- Christianity alleviating suffering, explored.

- Extended creative story.

…

Month 3

- "Frequencies" explored as sources of healing and suffering; and examined through multiple

  senses.

- Interactions causing cellular, molecular, and DNA changes studied.

- Cultural hierarchies and dominance.

- Non-binaries researched.

- Sex binaries are exclusionary. What about Darwinism?

…

- Synergistic 24/7 process ends at the end of the month.

- Approximately 50 small book ideas potentially generated by the researcher: some of these

are fleshed out. (Shall I get to them all? Or shall I summarise a number in key texts?)

- Approximately 5 business ideas generated during the research project. A few worked on

more than others. (Likely to explore two business ideas when project finalised.)

…

End of short sample.

Appendix 12

<u>Fiction Analysis Form</u>

The fiction analysis form below enabled the researcher to gain a general appreciation of a creative text. A document furthermore was created to store key quotations and reference links where appropriate.

Author/s:	Title:	Discipline/s: Genre/s: Date:

Historical background of the novel: Fit with author's work: Research evidence:	Gaps being filled:	Narrative themes: Narrative purpose:
Seminal work: Authoritative or influential work:	Geometric shape: Chronological list of events and timeframes:	Time direction/s:

Discipline engagement: Multidiscipline engagement:	Audience/s:	Knowledge influencing or seeking change:
PD type: **Binaries and complexities:**	**Story and sub-story arcs:** **Direction of time:** **Emotional pinnacle:** **Resolution:**	**Character types and character arcs:**

Scenery arc:	Story, scene, and character voices:	Plots and sub-plots:
Main images or interesting images:	**Originality:**	**Language style:**

Character depth and development:	Literary techniques where appropriate:	Clarity:
Tone variations:	Technical jargon:	Quirky material:

Language/s influencing the work:	Reveals or shocks:	Plot setups: Emotional change setups:
Reviews of novel: Sufficiency of reviews:	Place of writing:	Author's culture: Place culture:

Culture/s in novel:	Succinct summary of author's approach:	Clarity: Conciseness: Elegance:
Critical theory engagement:	Reader engagement:	Commercialisation packaging: Wide or limited appeal:

Appendix 13

Research Paper Analysis Form

The research paper analysis form below assisted the researcher to gain a general appreciation of an academic text. Another document furthermore was created to store the Harvard style referencing, key quotations extrapolated and page numbers.

Author/s:	Title:	Discipline: Date: Themes:

Current/old research:	Terms and their definitions:	Theoretical framework and or theory analysed:
Historical context and background:	Purpose of the paper: Seminal work or not: Other works :	Key quotes and references and page numbers:

What is/are the method/s:	What is/are the Result/s:	Justified approach/es in LR: structure, method/s and result/s:
What is the author's or group's perspective	Place of the research:	Research strengths and weaknesses: Gaps in the research design: Gaps identified to fill:

Peer reviewed journal: Not peer reviewed:	Debates in the field:	Fits with or diverges from existing research:

References

Alcoff, L 1988, 'Cultural feminism versus post-structuralism: the identity crisis in feminist theory', *Jstor.org*, vol. 13, no. 3, pp. 405–436, viewed 19 February 2021, <https://www.jstor.org/stable/3174166?seq=1>.

Allen, M (ed.) 2017, *The SAGE encyclopedia of communication research methods*, SAGE Publications Inc, USA.

Anderson, SW 2012, *Readings of trauma, madness, and the body*, Palgrave Macmillan US, New York.

Annas, G 2016, 'Chapter 18: the man on the moon', in S Susan Schneider (ed.), *Science Fiction and Philosophy: From Time Travel to Superintelligence*, Wiley-Blackwell, New Jersey.

Ansell, G 2019, *How science fiction and fantasy can help us make sense of the world*, The Conversation, viewed 1 July 2021, <https://theconversation.com/how-science-fiction-and-fantasy-can-help-us-make-sense-of-the-world-110044>.

Appleton, V 1911, *Tom swift and his electric rifle*, Grosset & Dunlap, New York.

Arend, RJ 2020, 'The expected prisoner's dilemma – with rationally arising cooperation', in L Wang (ed.), *PLOS ONE*, vol. 15, no. 9, p. e0239299, viewed 1 October 2020, <https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0239299>.

Arendt, C & Nuru, A 2017, 'Journals', in M Allen (ed.), *The SAGE Encyclopedia of Communication Research Methods*, SAGE Publications Inc, USA, viewed 27 January 2022, <https://methods.sagepub.com/reference/the-sage-encyclopedia-of-communication-research-methods/i7487.xml#:~:text=Methodological%20journals%20are%20used%20during,process%2C%20regardless%20of%20method%20chosen.&text=Communication%20researchers%20employing%20quantitative%20methods,on%20their%20process%20as%20well.>.

Aristotle 350BCa, *Posterior analytics: book 1*, The Internet Classics Archive, Massachusetts Institute of Technology, viewed 29 December 2020, <http://classics.mit.edu/Aristotle/posterior.1.i.html>. Translated by G. Mure.

Aristotle 350BCb, *Posterior Analytics: Book 2*, The Internet Classics Archive, Massachusetts Institute of Technology, viewed 29 December 2020, <http://classics.mit.edu/Aristotle/posterior.2.ii.html>.

Translated by G. Mure.

Aristotle 350BCc, *Prior analytics: book 1*, The Internet Classics Archive, Massachusetts Institute of Technology, viewed 29 December 2020, <http://classics.mit.edu/Aristotle/prior.1.i.html>. Translated by A. Jenkinson.

Aristotle 350BCd, *Prior analytics: book 2*, The Internet Classics Archive, Massachusetts Institute of Technology, viewed 29 December 2020, <http://classics.mit.edu/Aristotle/prior.2.ii.html>. Translated by A. Jenkinson.

Atwood, M 1939, *The handmaid's tale*, Anchor Books, New York. 1998.

Australian Federal Police 2020, 'Annex A: National Witness Protection Program annual report 2019–20', in *Australian federal police annual Report 2019-20*, Australian Federal Police, Canberra.

Australian Human Rights Commission 2011, *Workplace bullying: violence, harassment and bullying fact sheet*, humanrights.gov.au, viewed 30 January 2022, <https://humanrights.gov.au/our-work/employers/workplace-bullying-violence-harassment-and-bullying-fact-sheet

Baddeley, M 2018, *Behavioural economics and finance*, *Routledge & CRC Press*, 2nd Edition, Routledge, England, viewed 8 June 2021, <https://www.routledge.com/Behavioural-Economics-and-Finance/Baddeley/p/book/9780415792196>.

Bainbridge, J, Goc, N & Tynan, L 2011, *Media & journalism: new approaches to theory and practice*, 2nd Edition, Oxford University Press, Victoria, Australia, viewed 26 January 2022, <https://www.worldcat.org/title/media-journalism-new-approaches-to-theory-and-practice/oclc/759905581?referer=di&ht=edition>.

Barrett, Jeffrey A 2003, 'Are our best physical theories (probably and/or approximately) true?', *Philosophy of Science*, vol. 70, no. 5, pp. 1206–1218, viewed 30 May 2021, <https://www.journals.uchicago.edu/doi/abs/10.1086/377401>.

Bauman, Z 2003, *Liquid love: on the frailty of human bonds*, Polity Press, Cambridge, UK.

BBC 2022, *Crime*, BBC Bitesize, viewed 30 January 2022, <https://www.bbc.co.uk/bitesize/guides/zqb2pv4/revision/1>.

Beetham, G & Demetriades, J 2007, 'Feminist research methodologies and development: overview and practical application', *Gender & Development*, vol. 15, no. 2, pp. 199–216.

Binmore, K & Vulkan, N 1999, 'Applying game theory to automated negotiation', *NETNOMICS*, vol.

1, no. 1, pp. 1–9.

Bleich, D 1975, 'The subjective character of critical interpretation', *College English*, vol. 36, no. 7, p. 739, viewed 20 July 2021, <https://www.jstor.org/stable/375172>.

Blonski, M & Spagnolo, G 2015, 'Prisoners' other dilemma', *International Journal of Game Theory*, vol. 44, no. 1, pp. 61–81, viewed 26 January 2022, <https://econpapers.repec.org/article/sprjogath/v_3a44_3ay_3a2015_3ai_3a1_3ap_3a61-81.htm>.

Blum, W & Leiss, D 2007, 'How do students and teachers deal with mathematical modelling problems? The example "Filling up"', in C Haines, P Galbraith, W Blum & S Khan (eds), *Mathematical Modelling: Education, Engineering and Economics - ICTMA 12*, Horwood Publishing, Chichester, pp. 222–231, viewed 4 December 2021, <https://www.sciencedirect.com/book/9781904275206/mathematical-modelling#book-info>.

Boone, C, de Brabander, B & van Witteloostuijn, A 1996, *The impact of personality on behavior in five prisoner's dilemma games*, NIBOR, Netherlands Institute of Business Organization andStrategy Research. NIBOR Research Memorandum No. 002, viewed 26 January 2022, <https://cris.maastrichtuniversity.nl/ws/portalfiles/portal/648391/guid-f8a6710b-6194-448c-ba12-d987a0a9b569-ASSET1.0.pdf>.

Boyd, J 1968, *The last starship from earth,* Weybright & Talley, New York.

Bradford, A 2017, *Deductive reasoning vs. inductive reasoning*, Live Science, Live Science, viewed 3 May 2021, <https://www.livescience.com/21569-deduction-vs-induction.html>.

Braithwaite, J, Chapman, B & Kapuscinski, C 1992, *Unemployment and crime one more time*, *Australian Institute of Criminology*, Australian National University, Canberra.

Brat, G 2022, *Position paper: modeling multiple human-automation dis- tributed systems using network-form games*, viewed 26 January 2022, <https://ntrs.nasa.gov/api/citations/20120011860/downloads/20120011860.pdf>.

Brien, D & Mcallister, M 2016, *Becoming authentic multidisciplinary or interdisciplinary researchers: methodological practices and outcomes*, *Textjournal*, viewed 6 February 2022, <http://www.textjournal.com.au/speciss/issue34/Brien&McAllister.pdf>.

Brudner, A 2012, 'The wrong, the bad and the wayward: liberalism's mala in se', in F Tanguay-Renaud & J Stribopoulos (eds), *Rethinking criminal law theory: new Canadian perspectives in the philosophy of domestic, transnational, and international criminal law*, Bloomsbury Publishing.

Bryant, A & Charmaz, K 2007, 'Introduction: grounded theory research: methods and practices', in *he SAGE Handbook of Grounded Theory - SAGE Research Methods*, pp. 1–28, viewed 17 July 2021, <https://methods.sagepub.com/book/the-sage-handbook-of-grounded-theory>.

Burgess, A & Hyman, S 1963, *A clockwork orange*, Norton, New York.

Bushnell, A 2019, *Skewed priorities comparing the growth of prison spending with police spending*, November, Institute of Public Affairs, Melbourne, viewed 11 February 2021, <https://ipa.org.au/wp-content/uploads/2019/11/Skewed-priorities-Comparing-the-growth-of-prison-spending-with-police-spending.pdf>.

Caldwell, M 1956, 'Group dynamics in the prison community', *Journal of Criminal Law and Criminology*, vol. 46, no. 5, p. 648, viewed 18 July 2021, <https://scholarlycommons.law.northwestern.edu/jclc/vol46/iss5/5/>.

Cantrell, K 2014, *The sideways hourglass: establishing the lemniscate as a narrative structure for writing and reading non-linear stories*, viewed 29 October 2020, <https://eprints.qut.edu.au/75989/1/Kate_Cantrell_Thesis.pdf>.

Caulfield, J 2019, *How to do thematic analysis, a step-by-step guide & examples*, Scribbr, viewed 4 May 2021, <https://www.scribbr.com/methodology/thematic-analysis/>.

Charmaz, K 2006, *Constructing grounded theory: a practical guide through qualitative analysis*, Sage Publications, London; Thousand Oaks, Calif., viewed 27 November 2020, <https://www.worldcat.org/title/constructing-grounded-theory-a-practical-guide-through-qualitative-analysis/oclc/70149187>.

Charmaz, K 2019, *Constructing grounded theory*, SAGE Publications Ltd, Thousand Oaks, California, viewed 22 February 2021, <https://uk.sagepub.com/en-gb/eur/constructing-grounded-theory/book235960>.

Clark, K & Sefton, M 2001, 'The sequential prisoner's dilemma: evidence on reciprocation', *The Economic Journal*, vol. 111, no. 468, pp. 51–68, viewed 22 May 2020, <https://onlinelibrary.wiley.com/doi/abs/10.1111/1468-0297.00588>.

Clarke, AE 2005, *Situational analysis: grounded theory after the postmodern turn*, Sage Publications, Thousand Oaks, Calif., viewed 27 November 2020, <https://www.worldcat.org/title/situational-analysis-grounded-theory-after-the-postmodern-turn/oclc/56880432>.

Clarke, M 2009, *For the term of his natural life*, Penguin, viewed 2 August 2020,

<https://www.booktopia.com.au/for-the-term-of-his-natural-life-popular-penguins-marcus-clarke/book/9780143202691.html>.

Cleff, T 2019, *Applied statistics and multivariate data analysis for business and economics: a modern approach using SPSS, stata, and excel*, *www.springer.com*, Springer International Publishing, viewed 2 May 2021, <https://www.springer.com/gp/book/9783030177669>.

Contessa, G 2010, 'Scientific models and fictional objects', *Synthese*, vol. 172, no. 2, pp. 215–229, viewed 1 July 2021, <https://www.jstor.org/stable/40496036>.

Cooper, R, DeJong, DV, Forsythe, R & Ross, TW 1996, 'Cooperation without reputation: experimental evidence from prisoner's dilemma games', *Games and Economic Behavior*, vol. 12, no. 2, pp. 187–218, viewed 16 October 2019, <https://www.sciencedirect.com/science/article/pii/S0899825696900135>.

Corbin, JM, Strauss, AL & Strauss, AL 2008, *Basics of qualitative research: techniques and procedures for developing grounded theory*, Sage Publications, Los Angeles, Calif., viewed 27 November 2020, <https://www.worldcat.org/title/basics-of-qualitative-research-techniques-and-procedures-for-developing-grounded-theory/oclc/165479202>.

Cosenza, E 2020, *Sentence discount legislation to pass SA government*, news.com.au, News.com.Au, viewed 25 July 2021, <https://www.news.com.au/national/south-australia/sa-beefs-up-laws-to-dramatically-reduce-sentence-discounts-for-early-guilty-pleas-to-serious-crimes/news-story/150afc8104b0fe5c58a1d4fcf4ad7639>.

Costandi, M 2017, *Nerve cells that go out on a limb show, how the ability to tweet evolved*, Scientific American, viewed 5 February 2022, <https://www.scientificamerican.com/article/nerve-cells-that-go-out-on-a-limb-show-how-the-ability-to-tweet-evolved/>.

Criminal Law Consolidation Act 1935 SA

Cross, C 2012, *Game theory: a Katerina Carter fraud thriller*, *Amazon*, Slice Publishing, USA, viewed 13 February 2022, <https://www.amazon.com.au/Game-Theory-Katerina-Thriller-2012-11-02/dp/B01HCAGNRY/ref=sr_1_1?crid=283ZUR2NXRAQ3&keywords=colleen+cross+game+theory&qid=1644793216&sprefix=colleen+cross+game+theor%2Caps%2C481&sr=8-1

Csicsery-Ronay Jr, I 2003, 'Marxist theory and science fiction', in E James & F Mendlesohn (eds), *The Cambridge companion to science fiction*, Cambridge University Press, New York, viewed 2 February 2022, <https://www-cambridge-org.ezproxy.usq.edu.au/core/books/cambridge-companion-to-science-fiction/1E7AD5D8608E14786793865CFDA1C1C5>.

Darwin, C 1859, *On the origin of species by means of natural selection, or preservation of favoured races in the struggle for life*, search.library.wisc.edu, viewed 11 February 2021, <http://darwin-online.org.uk/converted/pdf/1861_OriginNY_F382.pdf>.

Darwin, C 1871, *The descent of man, and selection in relation to sex*, J. Murray, London, viewed 9 February 2022, <http://darwin-online.org.uk/converted/pdf/1889_Descent_F969.pdf>.

Davis, EC 2009, 'Situating "Fluidity" (trans) gender identification and the regulation of gender diversity', *GLQ: A Journal of Lesbian and Gay Studies*, vol. 15, no. 1, pp. 97–130, viewed 4 November 2019, <https://read.dukeupress.edu/glq/article-abstract/15/1/97/34647/Situating-FLUIDITY-Trans-Gender-Identification-and?redirectedFrom=fulltext>.

Darwish, M 2018, 'The theories of creativity in fine arts (Analytical Study)', *International Journal of Academic Multidisciplinary Research*, vol. 2, no. 11, pp. 41–50, viewed 7 February 2022, <https://www.researchgate.net/profile/Mahmoud-Darwish-5/publication/329328334_The_Theories_of_Creativity_in_Fine_Arts_Analytical_Study/links/5c01c8a7a6fdcc1b8d4d04d1/The-Theories-of-Creativity-in-Fine-Arts-Analytical-Study.pdf?origin=publication_detail>.

Dawson, P 2008, 'Creative writing and postmodern interdisciplinarity', *TEXT*, vol. 12, no. 1, viewed 1 March 2021, <http://www.textjournal.com.au/april08/dawson.htm>.

De Los Reyes, A & Kazdin, AE 2008, 'When the Evidence Says, "Yes, No, and Maybe So"', *Current Directions in Psychological Science*, vol. 17, no. 1, pp. 47–51.

De Veaux, M 2013, 'The trauma of the incarceration experience Mika'il DeVeaux', *Harvard Civil Rights-Civil Liberties Law Review*, vol. 48, viewed 10 May 2021, <https://harvardcrcl.org/wp-content/uploads/sites/10/2013/04/DeVeaux_257-277.pdf>.

Del Toro, J, Lloyd, T, Buchanan, KS, Robins, SJ, Bencharit, LZ, Smiedt, MG, Reddy, KS, Pouget, ER, Kerrison, EM & Goff, PA 2019, 'The criminogenic and psychological effects of police stops on adolescent black and Latino boys', *Proceedings of the National Academy of Sciences*, vol. 116, no. 17, pp. 8261–8268, viewed 2 February 2021, <https://www.pnas.org/content/116/17/8261>.

Deslauriers-Varin, N, Lussier, P & St-Yves, M 2011, 'Confessing their crime: factors influencing the offender's decision to confess to the police', *Justice Quarterly*, vol. 28, no. 1, pp. 113–145.

Dick, P 1968, *Blade Runner: Do Androids Dream of Electric Sheep?*, Doubleday, USA.

Disch, T 2005, *Mythology and science fiction*, The University of Michigan, viewed 26 January 2022,

<https://www.press.umich.edu/pdf/9780472068968-3.pdf>.

Drizin, SA & Leo, RA 2004, *The problem of false confessions in the ost-DNA world*, Carolina Law Scholarship Repository, viewed 30 April 2021, <https://scholarship.law.unc.edu/nclr/vol82/iss3/3/>.

Dundar, S, Gokkurt, B & Soylu, Y 2012, 'Mathematical modelling at a glance: a theoretical study', *Procedia - Social and Behavioral Sciences*, vol. 46, pp. 3465–3470, viewed 23 November 2021, <https://www.sciencedirect.com/science/article/pii/S1877042812018228>.

Encyclopedia Britannica 2022a, *Epistemology*, viewed 7 February 2022, <https://www.britannica.com/topic/epistemology>.

Encyclopedia Britannica 2022b, *General relativity*, viewed 9 February 2022, <https://www.britannica.com/science/relativity/Curved-space-time-and-geometric-gravitation>.

Encyclopedia Britannica 2022c, *Special relativity*, viewed 9 February 2022, <https://www.britannica.com/science/relativity/Special-relativity>.

Enggist, S, Møller, L, Galea, G & Udesen, C (eds) 2014, *Prisons and health*, World Health Organization, viewed 30 January 2022, <https://www.euro.who.int/__data/assets/pdf_file/0005/249188/Prisons-and-Health.pdf>.

Evans, A 2017, *Ida*, Bonnier Publishing, viewed 26 January 2022, <https://www.amazon.com.au/IDA-Alison-Evans-ebook/dp/B01N9ESYA9>.

Exploring the Arts Foundation 2021, *The nature of creativity in writing*, www.electricka.com, Exploring the Arts Foundation, viewed 1 March 2021, <http://www.electricka.com/etaf/muses/languagearts/writing/creative_writing/the_nature_of_creativity_in_writing/the_nature_of_creative_writing.htm>.

Fabbri, D & Munari, A 1984, *Strategie del sapere: verso una psicologia culturale [Strategies of knowledge: towards a cultural psychology]*, Edizioni Dedalo, Milano.

Fairclough, N 2003, *analysing discourse: textual analysis for social research*, Psychology Press, London.

Fam, D 2014, *People and practices: fostering transitions toward sustainability through transdisciplinary inquiry and individual, social and organisational learning*, opus.lib.uts.edu.au, viewed 19 December 2021, <https://opus.lib.uts.edu.au/handle/10453/24171>.

Flood, M 1952, *Some experimental games*, RAND research memorandum (RM-789-1).

Fontanella, L, Maretti, M & Sarra, A 2013, 'Gender fluidity across the world: a multilevel item response theory approach', *Quality &*

Fook, J 2002, *Social work: critical theory and practice*, SAGE Publications Inc, London. 2nd Edition.

Freedman, C 1987, 'Science fiction and critical theory (La science-fiction et la théorie de la critique)', *Science Fiction Studies*, vol. 14, no. 2, pp. 180–200, viewed 26 January 2022, <https://www.jstor.org/stable/4239815>.

Garland, EL 2012, 'Pain processing in the human nervous system', *Primary Care: Clinics in Office Practice*, vol. 39, no. 3, pp. 561–571, viewed 5 February 2022, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3438523/>.

Foucault, M 1977, 'What is an author?', in D Bouchard (ed.), *Language, Counter-Memory, Practice: Selected Essays and Interviews*, Cornell University Press, Ithaca, NY, pp. 113–38, viewed 26 June 2021,
<https://www.open.edu/openlearn/ocw/pluginfile.php/624849/mod_resource/content/1/a840_1_michel_foucault.pdf>.

Freeman, D, Thompson, C, Vorontsova, N, Dunn, G, Carter, L-A ., Garety, P, Kuipers, E, Slater, M, Antley, A, Glucksman, E & Ehlers, A 2013, 'Paranoia and post-traumatic stress disorder in the months after a physical assault: a longitudinal study examining shared and differential predictors', *Psychological Medicine*, vol. 43, no. 12, pp. 2673–2684.

Fussell, JA 2013, *Science fiction inspires innovation in real world*, Phys.org, Phys.org, viewed 28 January 2020, <https://phys.org/news/2013-10-science-fiction-real-world.html>.

Geertz, C 1973, *The interpretation of cultures: selected essays*, Basic Books, New York.

Gernsback, H 1950, *Ralph 124C 41+: a romance of the year 2660*, Fell, New York. First published in 1911.

Glaser, B & Strauss, A 1999, *Discovery of grounded theory: strategies for qualitative research*, *Routledge & CRC Press*, Routledge, USA. Reprinted 2006.

Goff, A, Rose, E, Rose, S & Purves, D 2007, 'Does PTSD occur in sentenced prison populations? A systematic literature review', *Criminal Behaviour and Mental Health*, vol. 17, no. 3, pp. 152–162, viewed 18 February 2021, <https://onlinelibrary.wiley.com/doi/full/10.1002/cbm.653>.

Graham, C 2009, 'Developing creativity across cultures', *TEXT*, vol. Special Issue 16, viewed 1 March 2021, <http://www.textjournal.com.au/speciss/issue16/Graham.pdf>.

Grand Valley State University 2010, *Reflective writing: a brief overview of reflective writing*, Creative Writing, Fred Meijer Center for Writing and Michigan Authors, viewed 17 May 2021, <https://www.gvsu.edu/cms4/asset/CC3BFEEB-C364-E1A1-A5390F221AC0FD2D/creative_writing_reflective_writing_gg_final.pdf>.

Green, M & Williams, T 2018, 'On reflection: The role, mode and medium of the reflective component in practice as research', *Text Journal*, vol. 22, no. 1, viewed 17 May 2021, <http://textjournal.com.au/april18/green_williams.htm>.

Gregory, K 2018, *The financial impact of divorce lingers for decades, but who's bearing the brunt?*, ABC News, Australian Broadcasting Corporation, viewed 10 November 2020, <https://www.abc.net.au/news/2018-07-26/divorce-financial-impact-affecting-older-women/10037520>.

Hanel, PHP, Maio, GR & Manstead, ASR 2019, 'A new way to look at the data: similarities between groups of people are large and important.', *Journal of Personality and Social Psychology*, vol. 116, no. 4, pp. 541–562, viewed 11 January 2021, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC6428189/>.

Haney, C 2017, *The psychological impact of incarceration: implications for post-prison adjustment*, Office of the Assistant Secretary for Planning and Evaluation, U.S. Department of Health & Human Services, viewed 18 February 2021, <https://aspe.hhs.gov/basic-report/psychological-impact-incarceration-implications-post-prison-adjustment>.

Harrison, V 2006, 'he Pragmatics of Defining Religion in a Multi-cultural World', *The international journal for philosophy of religion*, vol. 59, pp. 1330-0152, viewed 12 February 2021, <https://www.gla.ac.uk/0t4/humanities/files/mindmapping/Religion1_files/docs/Pragmatics.pdf>

Hassan, L, Senior, J, Webb, RT, Frisher, M, Tully, MP, While, D & Shaw, JJ 2016, 'Prevalence and appropriateness of psychotropic medication prescribing in a nationally representative cross-sectional survey of male and female prisoners in England', *BMC Psychiatry*, vol. 16, no. 1, viewed 31 January 2022, <https://bmcpsychiatry.biomedcentral.com/articles/10.1186/s12888-016-1055-7>.

Hawkins, J 2017, in M Allen (ed.), *The SAGE encyclopedia of communication research*, SAGE Publications Inc, viewed 26 January 2022, <https://sk-sagepub-com.ezproxy.usq.edu.au/reference/the-sage-encyclopedia-of-communication-research-methods>.

Hayek, F 1960, *The collected works of F. A. Hayek: the constitution of liberty, the definitive edition*, University of Chicago Press, USA.

Hayes, R 1996, 'A new framework for understanding cognition and affect in writing.', in M Levy & S Ransdell (eds), *The science of writing*, Lawrence Erlbaum Associates., Mahwah, NJ.

Hellestveit, A 2014, 'Economy as religion', Masters Thesis, Norwegian University of Science and Technology, viewed 25 July 2021, <http://manifesttankesmie.no/wp-content/uploads/sites/2/2015/09/AndersHellestveit_master_EconomyAsReligion.pdf>.

Helmenstine, A 2019, *The history of atomic theory led to quantum mechanics*, ThoughtCo, viewed 8 February 2022, <https://www.thoughtco.com/history-of-atomic-theory-4129185>.

Herman, J 1997, *Trauma and recovery: the aftermath of violence — from domestic abuse to political terror*, Basic, New York, pp. 131–132.

Hernandez, S 2020, *A transdisciplinary evaluation of forest retention policies and practices in the Australian context*, Semantic Scholar, viewed 23 December 2021, <https://www.semanticscholar.org/paper/A-transdisciplinary-evaluation-of-forest-retention-Hernandez/f5cf3aea03174890c2be10f03aba201b66a0ca46>.

Hickey, S 2021, *Buprenorphine: helping prison inmates to stay away from illegal drugs - criminal law - Australia*, www.mondaq.com, Mondaq, Connecting Knowledge & People, viewed 18 July 2021, <https://www.mondaq.com/australia/crime/1034084/buprenorphine-helping-prison-inmates-to-stay-away-from-illegal-drugs>.

Hill, A 2021, *The last convict*, Michael Joseph, Australia, viewed 28 January 2022, <https://www.amazon.com.au/Last-Convict-Anthony-Hill/dp/176089446X/ref=sr_1_1?crid=285HA4KJDN6SD&keywords=the+last+convict&qid=1643365604&sprefix=the+last+convict%2Caps%2C302&sr=8-1>.

Honneth, A 1995, *The struggle for recognition: the moral grammar of social conflicts*, Polity Press, Cambridge, UK.

Horkheimer, M 1972, 'Traditional and critical theory', in S Aronowitz. (ed.), *Critical Theory: Selected Essays*, Herder and Herder, New York. First published 1937.

Horkheimer, M 1993, *Between philosophy and social science*, MIT Press, Cambridge MA.

Hume, D 1739, *A treatise of human nature*, Clarendon Press, Oxford.

Jia, X 2014, *Tongtong's summer*, Wyrm Publishing, New Jersey. Translator: Ken Liu.

Johnson, P 2019, 'Critique as ideology critique in a neoliberal age', *Philosophy & Social Criticism*,

vol. 46, no. 7, pp. 810–828, viewed 30 October 2019, <https://journals-sagepub-com.ezproxy.usq.edu.au/doi/pdf/10.1177/0191453719860229>.

Jonsberg, B 2016, *Game theory*, Allen & Unwin, viewed 26 January 2022, <https://www.google.com.au/books/edition/Game_Theory/wRxWDQEACAAJ?hl=en>.

Jost, J, Bertschinger, N, Olbrich, E & Wolpert, D 2018, 'Information Geometry and Game Theory', *Information geometry and its applications*, pp. 19–46, viewed 3 March 2021, <https://link.springer.com/chapter/10.1007/978-3-319-97798-0_2>.

Journal Psyche 2018, *Freud's model of the human mind*, http://journalpsyche.org/?s=model+of+the+mind, Journal Psyche.

Kassin, SM 2014, 'False confessions: causes, consequences and implications for reform', in ST Fiske (ed.), *Policy Insights from the Behavioral and Brain Sciences*, vol. 1, no. 1, pp. 112–121, viewed 13 February 2021, <https://journals.sagepub.com/doi/pdf/10.1177/2372732214548678>.

Kassin, SM, Drizin, SA, Grisso, T, Gudjonsson, GH, Leo, RA & Redlich, AD 2010, 'Police-induced confessions: risk factors and recommendations.', *Law and Human Behavior*, vol. 34, no. 1, pp. 3–38, viewed 9 March 2019, <https://web.williams.edu/Psychology/Faculty/Kassin/files/White%20Paper%20online%20(09).pdf>.

Khadjavi, M & Lange, A 2013, 'Prisoners and their dilemma', *Journal of Economic Behavior & Organization*, vol. 92, pp. 163–175, viewed 11 February 2020, <https://www.sciencedirect.com/science/article/pii/S0167268113001522>.

Klages, M 2006, *Literary theory: a guide for the perplexed*, https://ebookcentral-proquest-com.ezproxy.usq.edu.au/lib/usq/reader.action?docID=742898&ppg=38, Bloomsbury Publishing Plc, viewed 19 February 2021, <https://www.worldcat.org/title/literary-theory-a-guide-for-the-perplexed/oclc/71164624?page=citation>.

Klein, J 1990, *Interdisciplinarity*, MI Wayne State University Press, Detroit.

Klemperer, P 2004, *Auctions: theory and practice*, *Econpapers*, 23 March, Princeton University Press, New Jersey, viewed 11 June 2021, <https://econpapers.repec.org/paper/nufeconwp/049.htm>.

Knierim, J 2020, *Chapter 1: motor units and muscle receptors*, nba.uth.tmc.edu, Neuroscience Online: An Electronic Textbook for the Neurosciences.

Kokomo, E & Emvudu, Y 2016, 'Mathematical modeling: proposal of a general methodology and application of this methodology to epidemiology', *Academic Journal of Applied Mathematical*

Sciences, vol. 11, no. 2, pp. 147–156, viewed 26 January 2022, <https://www.researchgate.net/publication/326369537_Mathematical_Modeling_Proposal_of_a_General_Methodology_and_Application_of_This_Methodology_to_Epidemiology>.

Kolind, T & Duke, K 2016, 'Drugs in prisons: exploring use, control, treatment and policy', *Drugs: Education, Prevention and Policy*, vol. 23, no. 2, pp. 89–92, viewed 18 July 2021, <https://www.tandfonline.com/doi/full/10.3109/09687637.2016.1153604>.

Krauth, N 2006, 'The domains of the writing process', in N Krauth & T Brady (eds), *Creative writing: theory beyond practice*, Post Pressed, Teneriffe, QLD.

Krauth, N 2011, 'Evolution of the exegesis: the radical trajectory of the creative writing doctorate in Australia', *TEXT*, vol. 15, no. 1, viewed 17 May 2021, <http://www.textjournal.com.au/april11/krauth.htm>.

Kuckartz, U 2020, *Qualitative text analysis*, SAGE Publications Ltd, viewed 26 November 2020, <https://uk.sagepub.com/en-gb/eur/qualitative-text-analysis/book240393>.

Krugman, P 2014, 'Beliefs, facts and money – consevative delusions about inflation', *New York Times*, 17 June, viewed 30 January 2022, <https://www.nytimes.com/2014/07/07/opinion/paul-krugman-conservative-delusions-about-inflation.html>.

Lange, W 2018, *Game theory*, Pacific Arts Publishing, San Diego, CA, viewed 26 January 2022, <https://www.worldcat.org/title/game-theory/oclc/1065546946?loc=>.

Lavalle, S 1995, *A game-theoretic framework for robot motion planning*, University of Illinois, Illinois, viewed 27 January 2022, <http://lavalle.pl/papers/Lav95.pdf>. PhD Dissertation.

Leckie, A 2013, *Ancillary justice*, Orbit, New York.

Lee, M 2022, *Nonbinary gender pronouns*, University of Minnesota, viewed 26 January 2022, <https://writing.umn.edu/sws/quickhelp/grammar/nonbinary.html>.

Legal Services Commission of SA 2020a, *Police questioning and interviewing*, www.lawhandbook.sa.gov.au, Legal Services Commission of SA, viewed 21 November 2020, <https://lawhandbook.sa.gov.au/ch03s01s05s01.php>.

Legal Services Commission of SA 2020b, *Sentencing considerations*, Sa.gov.au, Legal Services Commission of South Australia, viewed 21 November 2020, <https://lsc.sa.gov.au/dsh/ch10s05.php>.

Legal Services Commission of SA 2020c, *Sentencing purposes, principles and factors*,

www.lawhandbook.sa.gov.au, viewed 21 November 2020, <https://lawhandbook.sa.gov.au/ch13s05s01.php>.

Legal Services Commission of South Australia 2019, *Declining to prosecute*, Law Handbook, Legal Services Commission of South Australia, viewed 26 February 2021, <https://lawhandbook.sa.gov.au/ch13s04s06s01.php>.

Legal Services Commission of SA 2021a, *Arrest*, Law Handbook, Legal Services Commission of South Australia, viewed 25 February 2021, <https://lawhandbook.sa.gov.au/ch03s01s04.php>.

Legal Services Commission of SA 2021b, *General principles in criminal law*, Law Handbook SA, Legal Services Commission of South Australia, viewed 11 February 2021, <https://lawhandbook.sa.gov.au/ch12s02.php>.

Legal Services Commission of SA 2021c, *Police powers and forensic procedures*, lsc.sa.gov.au, viewed 25 February 2021, <https://lsc.sa.gov.au/dsh/print/ch05.php>.

Legal Services Commission of SA 2021d, *Reduction of sentence for early guilty plea*, www.lawhandbook.sa.gov.au, Legal Services Commission of South Australia, viewed 10 February 2021, <https://lawhandbook.sa.gov.au/ch13s05s02s01.php>.

Legal Services Commission of SA 2021e, *The police and you factsheet*, lsc.sa.gov.au, Legal Services Commission of South Australia, viewed 11 February 2021, <https://lsc.sa.gov.au/cb_pages/policeandyoufactsheet.php>.

Leigh, A 2020, 'The second convict age: explaining the return of mass imprisonment in Australia', *Economic Record*, viewed 28 April 2021, <http://andrewleigh.org/pdf/SecondConvictAge.pdf>.

Leo, R 1995, 'Inside the Interrogation Room', *Journal of criminal law and criminology*, vol. 86, no. 2, viewed 31 January 2022, <https://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=6862&context=jclc>.

Li, Y, Tee, K, Yan, R, Chan, WL & Wu, Y 2016, 'A framework of human–robot coordination based on game theory and policy iteration', *IEEE Transactions on Robotics*, vol. 32, no. 6, viewed 26 January 2022, <https://www.semanticscholar.org/paper/A-Framework-of-Human%E2%80%93Robot-Coordination-Based-on-Li-Tee/2b7cc985693962d8e3b30be5444d9fc6e6d0028c>.

LöwithK 1982, *Max Weber and Karl Marx*, in T Bottomore & W Outhwaite (eds), trans. H Fantel, Allen & Unwin. First published 1932.

Lumen 2022, *Critical theories paradigm*, courses.lumenlearning.com, Lumen Learning, viewed 3

February 2022, <https://courses.lumenlearning.com/introductiontocommunication/chapter/critical-theories-paradigm/#:~:text=The%20Critical%20Theories%20Paradigm%20helps>. Introduction to Communication.

Lutya, T 2012, 'Importance of a stable home and family environment in the prevention of youth offending in South Africa, Office of Justice Programs', *South Africa. International Journal of Criminology and Sociology,* vol. 1, pp. 86–92., viewed 18 July 2021, <https://www.ojp.gov/ncjrs/virtual-library/abstracts/importance-stable-home-and-family-environment-prevention-youth>.

Maccormick, A 1950, 'The prison' s role in crime prevention', *Journal of Criminal Law and Criminology*, vol. 41, no. 1, p. 1950, viewed 25 July 2021, <https://scholarlycommons.law.northwestern.edu/cgi/viewcontent.cgi?article=3752&context=jclc>.

MacDonald, H 1995, *The mind game*, PenguinRandomhouse.com, Ballantine Books, viewed 26 January 2022, <https://www.penguinrandomhouse.com/books/105051/the-mind-game-by-hector-macdonald/>.

Max-Neef, MA 2005, 'Foundations of transdisciplinarity', *Ecological Economics*, vol. 53, no. 1, pp. 5–16.

McDade, TW, Ryan, C, Jones, MJ, MacIsaac, JL, Morin, AM, Meyer, JM, Borja, JB, Miller, GE, Kobor, MS & Kuzawa, CW 2017, 'Social and physical environments early in development predict DNA methylation of inflammatory genes in young adulthood', *Proceedings of the National Academy of Sciences*, vol. 114, no. 29, pp. 7611–7616, viewed 16 December 2019, <https://www.pnas.org/content/114/29/7611>.

McKee, A 2003, *Textual Analysis*, SAGE Publications Inc, viewed 3 May 2021, <https://us.sagepub.com/en-us/nam/textual-analysis/book225048>.

McNay, L 2013, 'Contemporary critical theory', in M Freeden, L Sargent & M Stears (eds), *The Oxford Handbook of Political*, Oxford University Press, UK, viewed 5 December 2019, <https://7t9r4tqlbs.pdcdn.xyz/dl2.php?id=189491282&h=fe72c0afb3dec45c1781d471d39ba3b4&u=cache&ext=pdf&n=The%20oxford%20handbook%20of%20political%20ideologies>.

Marinopoulou, A 2019, 'Critical theory: epistemological content and method', in P Liamputtong (ed.), *Handbook of Research Methods in Health Social Sciences*, Springer Nature, Switzerland, pp. 133–149, viewed 4 February 2022, <https://link.springer.com/referenceworkentry/10.1007%2F978-981-10-5251-4_58>.

Meehan, M 2010, *Below the styx*, Allenandunwin.com, viewed 2 August 2020, <https://www.allenandunwin.com/browse/books/fiction/literary-fiction/Below-the-Styx-Michael-Meehan-9781741757804>.

Mills, A, Durepos, G & Wiebe, E 2010, *Encyclopedia of case study research, volumes I...*, ResearchGate, SAGE Publications, viewed 4 May 2021, <https://www.researchgate.net/publication/230557680_15_Mills_A_J_Durepos_G_and_Wiebe_E_Eds_2010_Encyclopedia_of_Case_Study_Research_Volumes_I_and_II_Thousand_Oaks_CA_Sage>.

Miranda v. Arizona, 384 U.S. 436 (1966).

Montuori, A 2005, 'Gregory Bateson and the challenge of transdisciplinarity', *Cybernetics and Human Knowing*, vol. 12, no. (1-2), pp. 147-158(112), viewed 27 December 2021, <https://www.researchgate.net/profile/Alfonso-Montuori/publication/228380041_Gregory_Bateson_and_the_Promise_of_Transdisciplinarity/links/00463525414e8847c9000000/Gregory-Bateson-and-the-Promise-of-Transdisciplinarity.pdf?origin=publication_detail>.

Montuori, A 2010, 'Research and the research degree: Transdisciplinarity and creative inquiry', in M Maldonato & R Pietrobon (eds), *Research   on scientific research: a transdisciplinary study*, Brighton & Portland, Sussex Academic Press, pp. (110-135).

Montuori, A 2013, 'The complexity of transdisciplinary literature Reviews', *Complicity: An International Journal of Complexity and Education*, vol. 10, no. 1/2, viewed 27 September 2020, <https://www.researchgate.net/profile/Alfonso-Montuori/publication/259174205_The_Complexity_of_Transdisciplinary_Literature_Reviews/links/00b4952a1c1cad56d3000000/The-Complexity-of-Transdisciplinary-Literature-Reviews.pdf?origin=publication_detail>.

Morgan, M 2001a, 'Models, stories and the economic world', *Journal of Economic Methodology*, vol. 8, no. 3, pp. 361–384, viewed 7 January 2021, <https://www.tandfonline.com/doi/abs/10.1080/13501780110078972>.

Morgan, M 2001b, *The curious case of the prisoner's dilemma: model situation? Exemplary narrative?*, ResearchGate, The London School of Economics and Political Science, viewed 30 December 2020, <https://www.researchgate.net/profile/Mary_Morgan3/publication/30526286_The_curious_case_of_the_prisoner%27s_dilemma_model_situation_Exemplary_narrative/links/0c960529c58d1383df000000/The-curious-case-of-the-prisoners-dilemma-model-situation-Exemplary-

narrative.pdf?origin=publication_detail>. This paper was written for the Princeton Workshops in the History of Science:'Model Systems, Cases and Exemplary Narratives' 10th February, 2001..

Morgan, R 2005, *Market forces*, *Open WorldCat*, Del Rey/Ballentine Books, New York.

Morin, E 1991, *Le idee: habitat, vita, organizzazione, usi e costumi. [Ideas: habitat, life, organization, use, and customs.]*, Feltrinelli, Milano.

Morrow, R & Brown, D 1994, *Critical Theory and Methodology*, *SAGE Knowledge*, SAGE Publications, Inc, Thousand Oaks, California, viewed 21 July 2021, <https://sk.sagepub.com/books/critical-theory-and-methodology#:~:text=Critical%20Theory%20traces%20its%20roots>.

Nakanishi, N 2009, 'Noncooperative farsighted stable set in an n-player prisoners' dilemma', *International Journal of Game Theory*, vol. 38, no. 2, pp. 249–261, viewed 26 January 2022, <https://www.researchgate.net/publication/46536944_Noncooperative_farsighted_stable_set_in_an_n-player_prisoners'_dilemma>.

Nasrullah Mambrol 2018, *Trauma studies*, Literary Theory and Criticism, viewed 9 May 2021, <https://literariness.org/2018/12/19/trauma-studies/>.

Nasar, S 1998, *A beautiful mind*, Simon & Schuster, USA.

Nedim, U 2015, *The protection of police informants and prison inmates: new information surrounding the death of Carl Williams*, Sydney Criminal Lawyers, viewed 26 February 2021, <https://www.sydneycriminallawyers.com.au/blog/the-protection-of-police-informants-and-prison-inmates-new-information-surrounding-the-death-of-carl-williams/>.

Neeper, C 2012, *The webs of varok*, Penscript Publishing House, USA.

Nellis, A 2016, *The color of justice: racial and ethnic disparity in state prisons*, The Sentencing Project, viewed 19 November 2021, <https://www.sentencingproject.org/publications/color-of-justice-racial-and-ethnic-disparity-in-state-prisons/>.

Nelson, RH 2014, *Economics as religion*, Penn State University Press, USA.

Neuroscience, H 2017, *The athlete's guide to the brain: strength*, Medium, viewed 5 February 2022, <https://blog.haloneuro.com/the-athletes-guide-to-the-brain-strength-175ae2ab46a9>.

Norris, MA & Welch, A 2020, 'Gender pronoun use in the university classroom: a post-humanist perspective', *Transformation in Higher Education*, vol. 5, viewed 9 June 2020,

<https://files.eric.ed.gov/fulltext/EJ1261585.pdf>.

NSW Government 2016, *Types of abuse in domestic and family violence*, Family & Community Services, viewed 30 January 2022, <https://www.facs.nsw.gov.au/domestic-violence/about/types-of-abuse-in-dv>.

Okorafor, N 2010, *Who fears death*, Daw Books, Inc., New York.

Oliver, S, Garner, P, Heywood, P, Jull, J, Dickson, K, Bangpan, M, Ang, L, Fourman, M & Garside, R 2017, 'Transdisciplinary working to shape systematic reviews and interpret the findings: commentary', *Environmental Evidence*, vol. 6, no. 1, viewed 30 June 2021, <https://environmentalevidencejournal.biomedcentral.com/articles/10.1186/s13750-017-0106-y>.

Orwell, G 1949, *Nineteen eighty-four*, Harcourt, Brace and Company, New York.

Palmer, J 2011, *'An eye open in the dark': life story ethnography and the future of social-ecological systems*, opus.lib.uts.edu.au, viewed 19 December 2021, <https://opus.lib.uts.edu.au/handle/10453/21893>.

Payne, J, Macgregor, S & McDonald, H 2015, *Homelessness among police detainees: results from the DUMA program*, February, Australian Institute of Criminology, viewed 18 July 2021, <https://www.aic.gov.au/sites/default/files/2020-05/tandi492.pdf>. Trend & issues in crime and criminal justice: no. 492.

Pearson, W 2003, 'Science fiction and queer theory', in E James & F Mendlesohn (eds), *The Cambridge companion to science fiction*, Cambridge University Press, New York, viewed 2 February 2022, <https://www-cambridge-org.ezproxy.usq.edu.au/core/books/cambridge-companion-to-science-fiction/1E7AD5D8608E14786793865CFDA1C1C5>.

Perrenet, J, Zwaneveld, B, van Overveld, K & Borghuis, T 2017, 'Quality criteria for Mmthematical models in relation to models' purposes: their usefulness in engineering education', in G Stillman, W Blum & G Kaiser (eds), *Mathematical Modelling and Applications: Crossing and Researching Boundaries in Mathematics Education*, Springer International Publishing, New York, pp. 141–152. Chapter 12.

Phelps, R 2018, *To save the research literature, get rid of the literature review*, Impact of Social Sciences Blog, viewed 28 June 2021, <http://eprints.lse.ac.uk/90746/>.

Picker, R 1994, *Chicago unbound an introduction to game theory and the law*, viewed 26 January 2022,

<https://chicagounbound.uchicago.edu/cgi/viewcontent.cgi?referer=&httpsredir=1&article=1049&context=law_and_economics>.

Pockett, R, Napier, L & Giles, R 2011, 'Chapter 1: critical reflection for practice', in A O'Hara & R Pockett (eds), *Skills For Human Service Practice*, Oxford University Press, Melbourne, Victoria, viewed 4 February 2022, <https://www.oup.com.au/media/documents/higher-education/he-samples-pages/he-health-landing-page/OHARA_9780195562859_SC.pdf>.

Popova, M 2014, *Why science-fiction writers are so good at predicting the future*, Brain Pickings, viewed 11 June 2021, <https://www.brainpickings.org/2014/02/20/joe-hanson-scifi/>.

Poundstone, W 1992, *Prisoner's dilemma*, Doubleday, New York, viewed 2 August 2020, <https://www.worldcat.org/title/prisoners-dilemma/oclc/23383657>.

Powers, R 2002, *Prisoner's dilemma*, HarperCollins, viewed 8 August 2020, <https://www.harpercollins.com/products/prisoners-dilemma-richard-powers?variant=32139132305442>.

Premier of South Australia 2020a, *Reduced sentence discount laws start today*, Premier of South Australia, viewed 25 February 2021, <https://www.premier.sa.gov.au/news/media-releases/news/reduced-sentence-discount-laws-start-today>.

Premier of South Australia 2020b, *Reforming sentence discounts*, Premier of South Australia, viewed 29 October 2020, <https://www.premier.sa.gov.au/news/media-releases/news/reforming-sentence-discounts>.

Putnam, FW 2013, 'The role of abusive states of being in interrogation', *Journal of Trauma & Dissociation*, vol. 14, no. 2, pp. 147–158, viewed 16 February 2021, <https://www.tandfonline.com/doi/abs/10.1080/15299732.2013.724344>.

Putri, A & Sarwoto, P 2016, *Saussurian binary opposition as the narrative structure of Williams' Summer and Smoke*, April, viewed 7 August 2020, <https://e-journal.usd.ac.id/index.php/JOLL/article/download/154/148>.

Qu, L & Weston, R 2020, 'Financial journeys of Australian parents after separation – transitions into and out of poverty', *Australian Journal of Social Issues*, vol. 56, pp. 54–77.

Quantity, vol. 48, no. 5, pp. 2553–2568, viewed 26 April 2020, <https://link.springer.com/article/10.1007/s11135-013-9907-4>.

Queensland Brain Institute 2018, *Where are memories stored in the brain?*, Uq.edu.au, The

University of Queensland, viewed 5 February 2022, <https://qbi.uq.edu.au/brain-basics/memory/where-are-memories-stored>.

Rajaniemi, H 2011, *The quantum thief*, Tor, New York, viewed 9 August 2020, <https://www.worldcat.org/title/quantum-thief/oclc/679929377>.

Rapley, J 2017, *How economics became a religion*, https://www.theguardian.com/, The Guardian, viewed 25 July 2021, <https://www.theguardian.com/news/2017/jul/11/how-economics-became-a-religion>.

Rhoades, EA 2011, 'Literature reviews', *Volta Review*, vol. 111, no. 3, pp. 353–368, viewed 29 December 2021, <https://eric.ed.gov/?id=EJ966483>.

Robinson, KS 2017, *New York 2140*, *Open WorldCat*, Orbit, New York.

Roettger, M, Lockwood, K & Dennison, S 2019, *Indigenous people in Australia and New Zealand and the intergenerational effects of incarceration*, Indigenous Justice Clearinghouse, viewed 3 December 2021, <https://www.indigenousjustice.gov.au/wp-content/uploads/mp/files/publications/files/intergenerational-effects-of-incarceration-fa.pdf>. Research Brief 26.

Rosenfield, PL 1992, 'The potential of transdisciplinary research for sustaining and extending linkages between the health and social sciences', *Social Science & Medicine*, vol. 35, no. 11, pp. 1343–1357.

Rothman, T 2011, 'Was Einstein the first to invent E = mc2?', *Scientific American*, viewed 8 February 2022, <https://www.scientificamerican.com/article/was-einstein-the-first-to-invent-e-mc2/>.

Rukeyser, M 2015, *Science fiction as the mythology of the future*, viewed 26 January 2022, <https://www.centerforfutureconsciousness.com/pdf_files/Readings/ScienceFictionLongArticle.pdf>.

Samuelson, L 2016, 'Game theory in economics and beyond', *Journal of Economic Perspective*, vol. 30, no. 4, pp. 107–130, viewed 10 February 2021, <https://pubs.aeaweb.org/doi/pdfplus/10.1257/jep.30.4.107>.

Saussure, F de 1959, *Course in general linguistics.*, Philosophical Library, New York, viewed 7 August 2020, <https://www.worldcat.org/title/course-in-general-linguistics/oclc/975059>.

Sayer, A 1992, *Method in social science: a realist approach*, *Routledge & CRC Press*, 2nd edition, Routledge, London, viewed 22 July 2021, <https://www.routledge.com/Method-in-Social-Science-Revised-2nd-Edition/Sayer/p/book/9780415582476>.

Safe Work Australia 2022, *Workplace violence and aggression*, viewed 30 January 2022, <https://www.safeworkaustralia.gov.au/safety-topic/hazards/workplace-violence-and-aggression/overview#:~:text=Effects%20of%20workplace%20violence%20and%20aggression&text=feelings%20of%20being%20alone%20and,%2Dtraumatic%20stress%20disorder%20(PTSD)>.

Schön, D 1983, *The reflective practitioner: how professionals think in action*, Temple Smith, London.

Schryen, G, Wagner, G & Benlian, A 2015, *Theory of knowledge for literature reviews: an epistemological model, taxonomy and empirical analysis of IS literature*, Research Gate, viewed 29 December 2020, <https://www.researchgate.net/publication/281850968_Theory_of_Knowledge_for_Literature_Reviews_An_Epistemological_Model_Taxonomy_and_Empirical_Analysis_of_IS_Literature>. Conference Paper: International Conference on Information Systems at Fort Worth, Texas, USA.

Schulz, H-J . 1987, 'Science fiction and ideology: some problems of approach (La science-fiction et l'idéologie: quelques problèmes de méthode)', *Science Fiction Studies*, vol. 14, no. 2, pp. 165–179, viewed 26 January 2022, <https://www.jstor.org/stable/4239814>.

Shammas, VL 2017, *Pains of imprisonment, the encyclopedia of corrections*, pp. 1–5, viewed 1 February 2021, <https://onlinelibrary.wiley.com/doi/full/10.1002/9781118845387.wbeoc020>.

Sharma, A 2013, 'Is E = Δmc 2 mathematically derived or speculated in Einstein's September 1905 paper?', *www.academia.edu*, vol. 26, no. 4, viewed 30 May 2021, <https://www.academia.edu/8409186/Is_E_%CE%94mc_2_mathematically_derived_or_speculated_in_Einsteins_September_1905_paper>.

Shiraev, E & Makhovskaya, O 2019, 'The traumatic psychological impact of character attacks on targets', in J Keohane, M Icks & S Samoilenk (eds), *Routledge Handbook of Character Assassination and Reputation Management*, Taylor & Francis, UK.

Smarandache, F, Yuhua, F & Fengjuan, Z 2013, *Unsolved problems in special and general relativity*, *Mathematics and Statistics Faculty and Staff Publications*, viewed 31 May 2021, <https://digitalrepository.unm.edu/math_fsp/73/>.

Smith, A 1776, *An inquiry into the nature and causes of the wealth of nations*, S Soares (ed.), viewed 31 January 2021, <https://www.ibiblio.org/ml/libri/s/SmithA_WealthNations_p.pdf>. Reprinted 2007.

Smith, A 2015, 'Introduction: "What grounded theory is…"', *Organizational Research Methods*, vol. 18, no. 4, pp. 578–580.

Smith, K 2014, *Émile Durkheim and the Collective Consciousness of Society*, *Cambridge University Press*, Anthem Press, viewed 21 July 2021, <https://www.cambridge.org/core/books/emile-durkheim-and-the-collective-consciousness-of-society/DA577E6B678C57DC4E607E6D13740C5E>.

Smith, T 2011a, 'Connecting the social and ecological: an exploration of learning-oriented, systemic practice in the field of "environment and development"', *undefined*, viewed 19 December 2021, <https://www.semanticscholar.org/paper/Connecting-the-social-and-ecological-%3A-an-of-in-the-Smith/0375c51b94b75050172e5cecb670dea797b4d40c>.

Snyder, H 2019, 'Literature review as a research methodology: an overview and guidelines', *Journal of Business Research*, vol. 104, no. 104, pp. 333–339.

Soter, S & Tyson, N 2000, *Cosmic Horizons: astronomy at the cutting edge*, American Museum of Natural History; Amazon.com, American Museum of Natural History; New Press, viewed 8 February 2022, <https://www.amnh.org/learn-teach/curriculum-collections/cosmic-horizons-book/ole-roemer-speed-of-light#:~:text=In%201676%2C%20the%20Danish%20astronomer,eclipses%20of%20Jupiter's%20moon%20Io.; https://www.amazon.com/Cosmic-Horizons-Astronomy-Cutting-American/dp/1565846028>.

Sprouffske, M 2021, *Declutter your mind journal: prompts and practices to inspire calm, clarity, and focus*, Callisto Media Incorporated, viewed 5 February 2022, <https://www.google.com.au/books/edition/Declutter_Your_Mind_Journal/P-gdzgEACAAJ?hl=en>.

Spurný, J, Kopeček, I, Ošlejšek, R, Plhák, J & Caputo, F 2021, 'The prisoner's dilemma in the workplace: how cooperative behavior of managers influence organizational performance and stress', *Kybernetes*, vol. ahead-of-print, no. ahead-of-print, viewed 9 June 2021, <https://www.sciencegate.app/document/10.1108/k-04-2020-0229>.

Stanford University 2005, *Critical theory*, *Stanford.edu*, Stanford Encyclopedia of Philosophy, Standford University, viewed 3 February 2022, <https://plato.stanford.edu/entries/critical-theory/>.

Stanford Encyclopedia of Philosophy 2019, *Egoism*, Stanford.edu, Stanford University, viewed 25 July 2021, <https://plato.stanford.edu/entries/egoism/>.

Stephens, A 2018, *5 Causes of Psychological Injury in the Workplace and How to Avoid Them*, www.peoplesense.com.au, PeopleSense, viewed 23 July 2021, <https://www.peoplesense.com.au/news/article/20122018-453/5-causes-of-psychological-injury-in-the-workplace-and-how-to-avoid-them>.

Sterling, B 1998, *Distraction*, Bantam Books, New York.

Stewart, T 2009, *The mysterious benedict society and the prisoner's dilemma*, Little, Brown and Company, USA, viewed 31 January 2022, <https://www.amazon.com.au/Mysterious-Benedict-Society-Prisoners-Dilemma/dp/1913322343/ref=sr_1_4?crid=JAXE09T32HUQ&keywords=the+mysterious+benedict+society&qid=1643609852&sprefix=the+mysteri%2Caps%2C1027&sr=8-4>.

Stiglitz, J 2013, *Joseph Stiglitz – 'why Economics matter''*, viewed 30 January 2022, <https://www.youtube.com/watch?v=NqqvbQdmkrM&t=00h34m40s>.

Stillman, S 2018, *The throwaways*, The New Yorker, viewed 26 February 2021, <https://www.newyorker.com/magazine/2012/09/03/the-throwaways>.

Strauss, AL 1987, *Qualitative analysis for social scientists*, Cambridge University Press, Cambridge; New York; Melbourne, viewed 27 November 2020, <https://www.worldcat.org/title/qualitative-analysis-for-social-scientists/oclc/780909272>.

Strauss, AL & Corbin, JM 1998, *Basics of qualitative research: techniques and procedures for developing grounded theory*, Sage Publications, Thousand Oaks, viewed 27 November 2020, <https://www.worldcat.org/title/basics-of-qualitative-research-techniques-and-procedures-for-developing-grounded-theory/oclc/39257153>.

Stross, C 2013, *Neptune's brood*, Penguin Publishing Group, USA.

Sugden, R 2000, 'Credible worlds: the status of theoretical models in economics', *Journal of Economic Methodology*, vol. 7, no. 1, pp. 1–31, viewed 15 October 2020, <https://academic.csuohio.edu/jdemarco/Neuroeconomics/Credible%20worlds%20%20the%20status%20of%20theoretical%20models%20in%20economics_files/3960534.pdf>.

Sullivan, S & Pecorino, P 2002, *Ethics: chapter five: teleological theories: egoism section 2. psychological egoism*, www.qcc.cuny.edu, Queensborough Community College, viewed 25 July 2021, <https://www.qcc.cuny.edu/SocialSciences/ppecorino/ETHICS_TEXT/Chapter_5_Teleological_Theories_Egoism/Psychological_Egoism.htm>.

Supa, D 2009, 'The origins of empirical versus critical epistemology in American communication', *American Communication Journal*, vol. 11, no. 3, viewed 3 February 2022, <http://ac-journal.org/journal/2009/Fall/4TheOriginsofEmpirical.pdf>.

Sutton, TC & Sutton, M 1969, 'Science Fiction as Mythology', *Western folklore*, vol. 28, no. 4, p. 230, viewed 17 March 2020, <https://www.jstor.org/stable/1499217>.

Sweeney, K 2020, *Settlement for slain informer's children*, The Young Witness, viewed 26 February 2021, <https://www.youngwitness.com.au/story/6783552/settlement-for-slain-informers-children/>.

Syll, L 2018, 'Why game theory never will be anything but a footnote in the history of social science', in *Real-world Economics Review, 83 (Self-Published; Swedish Economist; Professor at Malmö University College)*, viewed 10 February 2021, <http://www.paecon.net/PAEReview/issue83/Syll83.pdf>.

Takolander, M 2014, 'After romanticism, psychoanalysis and postmodernism: new paradigms for theorising creativity', *TEXT*, vol. 18, no. 2, viewed 1 March 2021, <http://www.textjournal.com.au/oct14/takolander.htm>.

Thompson, R 2019, *Feminist thought and transcending the gender binary: A Discussion, The Classic Journal*, Uga.edu, viewed 26 January 2022, <https://theclassicjournal.uga.edu/index.php/2019/05/24/feminist-thought-and-transcending-the-gender-binary-a-discussion/>.

Thomas, L 2019, *Prisoner post traumatic stress*, News-Medical.net, News: Medical & Life Sciences, viewed 18 February 2021, <https://www.news-medical.net/health/Prisoner-Post-Traumatic-Stress.aspx>.

Torraco, RJ 2005, 'Writing integrative literature reviews: guidelines and examples', *Human Resource Development Review*, vol. 4, no. 3, pp. 356–367, viewed 1 February 2022, <https://journals.sagepub.com/doi/abs/10.1177/1534484305278283?journalCode=hrda>.

Torraco, RJ 2016, 'Writing integrative reviews of the literature', *International Journal of Adult Vocational Education and Technology*, vol. 7, no. 3, pp. 62–70, viewed 28 December 2020, <https://sageprofessor.files.wordpress.com/2017/10/writing-integrative-reviews-of-the-literature-methods-and-purposes.pdf>.

Towse, A & Drummond, M 1997, *OHE briefing: the pros and cons of modelling in economic evaluation*, viewed 17 July 2021, <https://www.ohe.org/system/files/private/publications/231%20-%201997_Pros_and_Cons_of_Modeling.pdf?download=1>.

Tsiolkas, C 2015, *Baraccuda*, Allen & Unwin, viewed 26 January 2022, <https://www.readings.com.au/products/20081852/barracuda>.

Umulis, DM & Othmer, HG 2012, 'The importance of geometry in mathematical models of developing systems', *Current opinion in genetics & development*, vol. 22, no. 6, pp. 547–552, viewed 3 March 2021, <https://www.ncbi.nlm.nih.gov/pmc/articles/PMC3765006/>.

University of Southern Queensland 2022, *Assessment criteria: creative writing honours dissertation*, School of Humanities & Communication, Queensland.

University of Wollongong 2020, *Uni learning: report writing: using appendices*, Using appendices in your report, viewed 9 June 2021, <https://unilearning.uow.edu.au/report/1i.html>.

Urquhart, C, Lehmann, H & Myers, MD 2009, 'Putting the "theory" back into grounded theory: guidelines for grounded theory studies in information systems', *Information Systems Journal*, vol. 20, no. 4, pp. 357–381.

Valde, K 2017, 'Grounded theory', in M Allen (ed.), *The SAGE Encyclopedia of Communication Research Methods*, SAGE Publications Inc, USA, viewed 1 February 2022, <https://us.sagepub.com/en-us/nam/the-sage-encyclopedia-of-communication-research-methods/book244974>.

van Ginneken, E 2016, *The pain and purpose of punishment: A subjective perspective*, Howard League, viewed 18 February 2021, <https://www.researchgate.net/profile/Esther_Van_Ginneken/publication/301351246_The_pain_and_purpose_of_punishment_A_subjective_perspective/links/5714c76b08ae8b02e65df1b9/The-pain-and-purpose-of-punishment-A-subjective-perspective.pdf>. What is Justice? Working Papers 22/2016.

van Neervan, E 2014, *Heat and light*, University of Queensland Press, QLD, viewed 26 January 2022, <https://www.amazon.com/Light-David-Unaipon-Award-Winners-ebook/dp/B00M6G19EM/ref=sr_1_1?crid=2GPPQHZIVT711&keywords=ellen+van+neerven&qid=1641264365&sprefix=ellen+van+neerven%2Caps%2C316&sr=8-1>.

Verne, J 1956, *Twenty thousand leagues under the sea*, Heritage Press,. First printed: 1870.

Venton, D 2015, *Big question: can my brain get too full?*, Wired, viewed 5 February 2022, <https://www.wired.com/2015/06/can-my-brain-get-too-full/>.

Violanti, JM, Burchfiel, CM, Miller, DB, Andrew, ME, Dorn, J, Wactawski-Wende, J, Beighley, CM, Pierino, K, Joseph, PN, Vena, JE, Sharp, DS & Trevisan, M 2006, 'The buffalo cardio-metabolic occupational police stress (BCOPS) pilot study: methods and participant characteristics', *Annals of Epidemiology*, vol. 16, no. 2, pp. 148–156, viewed 31 January 2022, <https://pubmed.ncbi.nlm.nih.gov/16165369/>.

Visher, CA, Debus-Sherrill, SA & Yahner, J 2011, 'Employment after prison: a longitudinal study of former prisoners', *Justice Quarterly*, vol. 28, no. 5, pp. 698–718, viewed 30 January 2022, <https://www.urban.org/sites/default/files/publication/32106/411778-Employment-after-Prison-A-Longitudinal-Study-of-Releasees-in-Three-States.PDF?__hstc=221944263.671a34e3a56a4c773f89949c75cda0bb.1494633600060.14946336000 61.1494633600062.1&__hssc=221944263.1.1494633600063&__hsfp=1773666937>.

Wang, W, Na, X, Cao, D, Gong, J, Xi, J, Xing, Y & Wang, F-Y 2020, 'Decision-making in driver-automation shared control: A review and perspectives', *IEEE/CAA Journal of Automatica Sinica*, pp. 1–19, viewed 26 January 2022, <https://arxiv.org/pdf/2007.12597.pdf>.

Webster, J & Watson, RT 2002, 'Analyzing the past to prepare for the future: writing a literature review', *MIS Quarterly*, vol. 26, no. 2, pp. xiii–xxiii.

Wells, HG 1978, *The war of the worlds*, Golden Press, Racine, Wis.

West, C & Zimmerman, DH 1987, 'Doing gender', *Gender & Society*, vol. 1, no. 2, pp. 125–151.

Wetmore, S, Neuschatz, J, Roth, J, Jenkins, B & Le Grand, A 2020, 'Incentivized to testify: informant witnesses', in M Miller & B Bornstein (eds), *Advances in Psychology and Law*, Springer, Cham, viewed 26 February 2021, <https://link.springer.com/chapter/10.1007%2F978-3-030-54678-6_2>.

Williams, J 1999, *Getting tough on crime: will it win the war?*, *National Library of Australia,* University of Adelaide, School of Economics, Adelaide, viewed 18 November 2021, <https://catalogue.nla.gov.au/Record/1657557>.

Wilson, S 2019, 'Selection of Methodology', in M Allen (ed.), *The SAGE encyclopedia of communication research methods*, SAGE Publications Inc, USA.

Wolfe, G 1980, *The shadow of the torturer*, Simon & Schuster, USA.

Woody, RH 2006, 'Family interventions with law enforcement officers', *The American Journal of Family Therapy*, vol. 34, no. 2, pp. 95–103, viewed 28 February 2020, <https://www.tandfonline.com/doi/abs/10.1080/01926180500376735>.

Yeshiva University 2021, *The innocence project*, Innocence Project, viewed 30 April 2021, <https://innocenceproject.org/>.

Yildiz, Y, Agogino, A & Brat, G 2014, 'Predicting pilot behavior in medium-scale scenarios using game theory and reinforcement learning', *Journal of Guidance, Control, and Dynamics*, vol. 37, no. 4, pp. 1335–1343, viewed 26 January 2022,

<http://repository.bilkent.edu.tr/bitstream/handle/11693/26543/Predicting%20pilot%20behavior%20in%20medium-scale%20scenarios%20using%20game%20theory%20and%20reinforcement%20learning.pdf?sequence=1>.

Yu, H, Lim, T, Ritchie, J, Sung, R, Louchart, S, Stănescu, IA, Roceanu, I & de Freitas, S 2012, 'Exploring the application of computer game theory to automated assembly', *Procedia Computer Science*, vol. 15, pp. 266–273, viewed 26 January 2022, <https://www.sciencedirect.com/science/article/pii/S187705091200840X>.

Zuin, L 2017, *How science fiction still inspires real technological innovation*, SYFY WIRE, viewed 11 June 2021, <https://www.syfy.com/syfywire/how-science-fiction-still-inspires-real-technological-innovation>.